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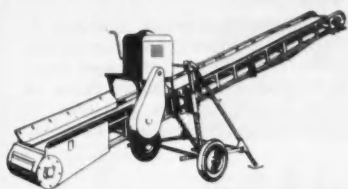
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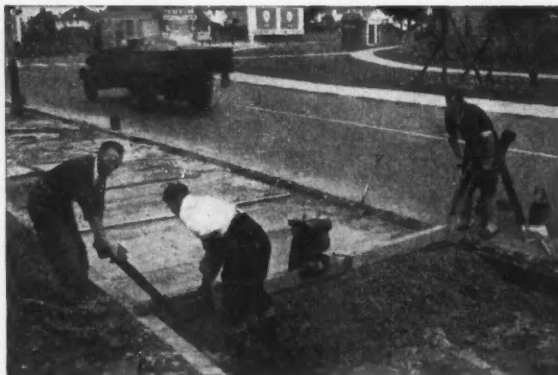
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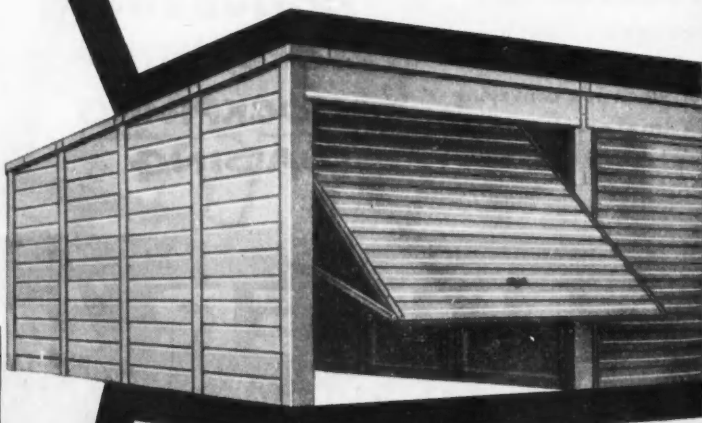
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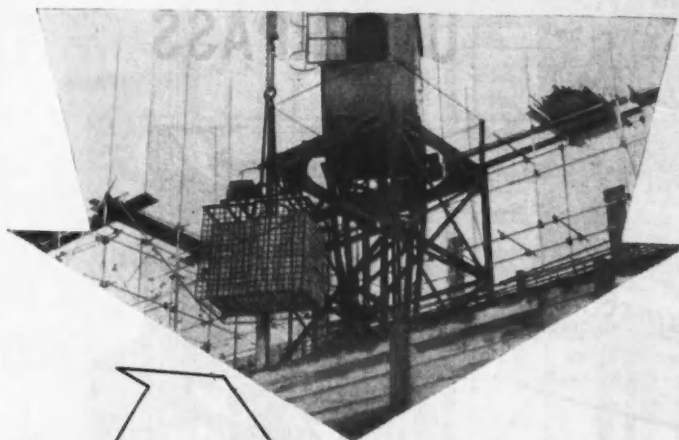
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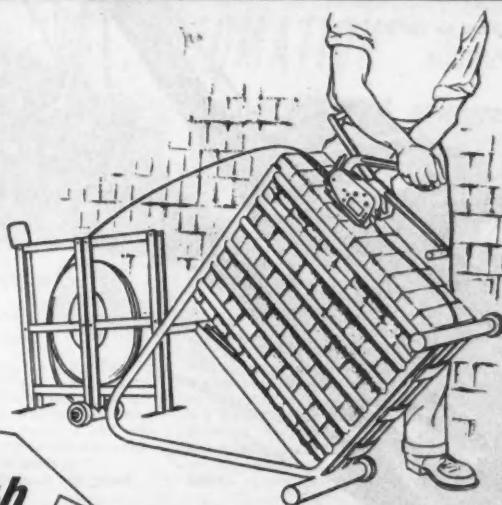
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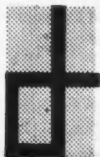
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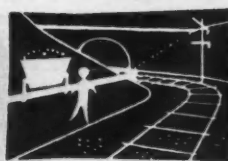
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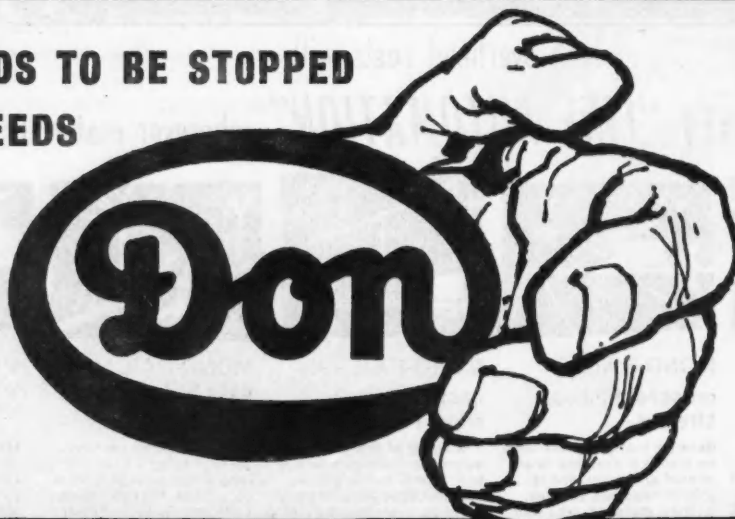
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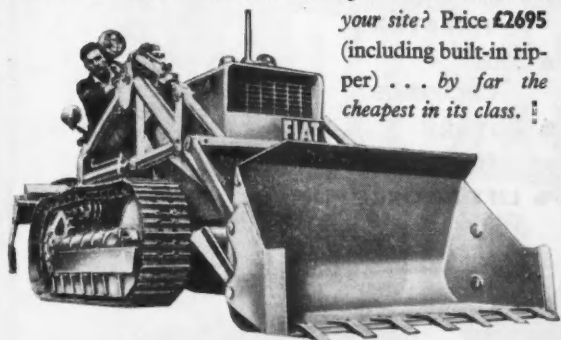
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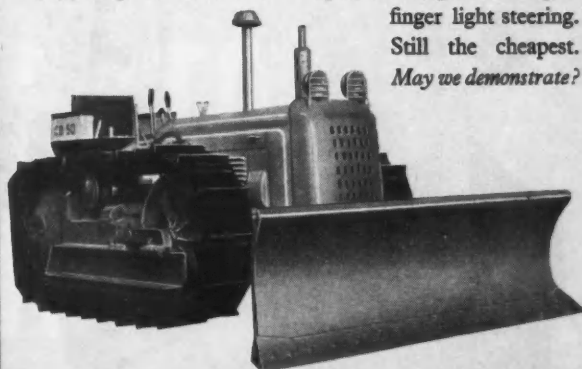
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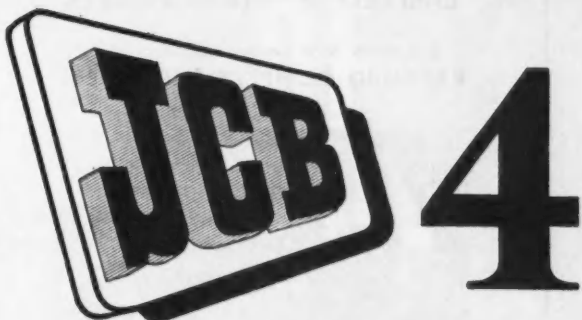
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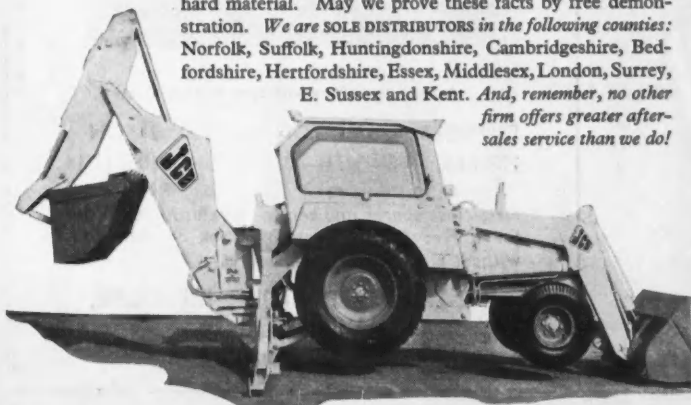
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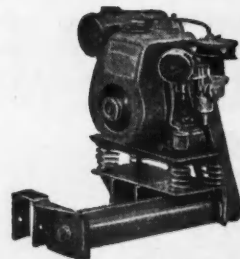
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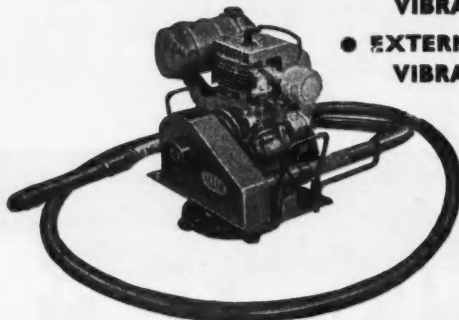
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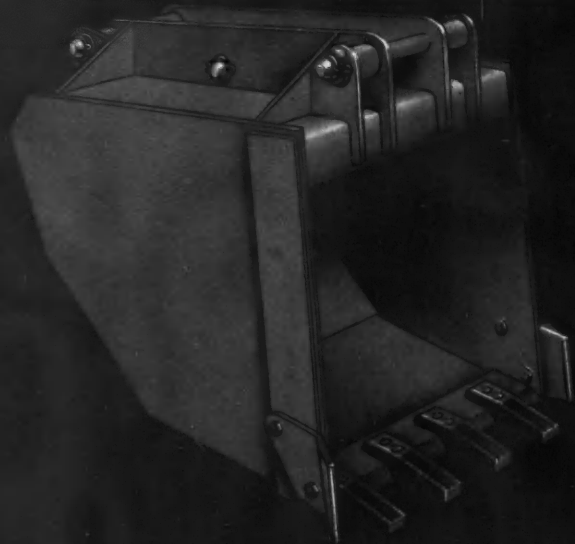
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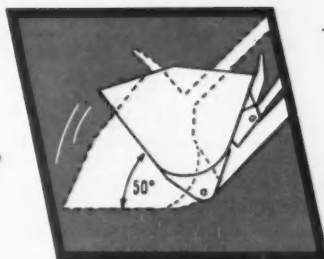
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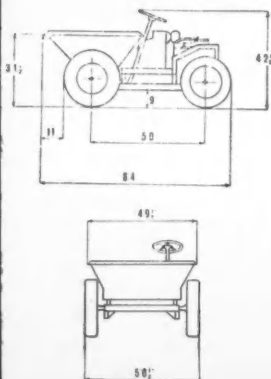
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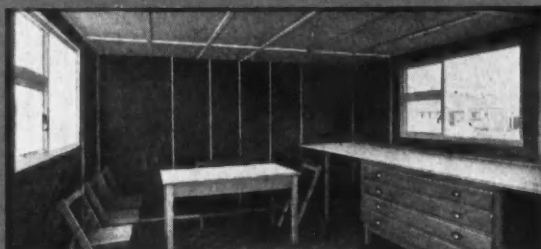
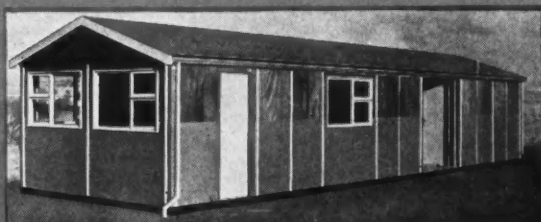
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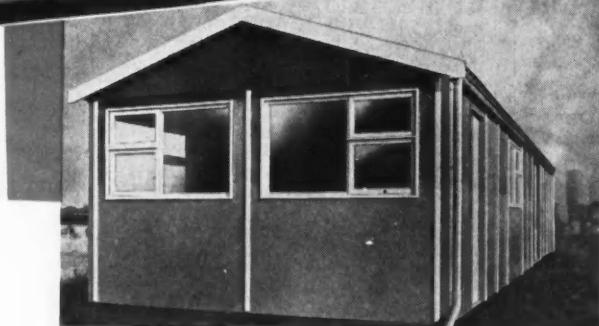
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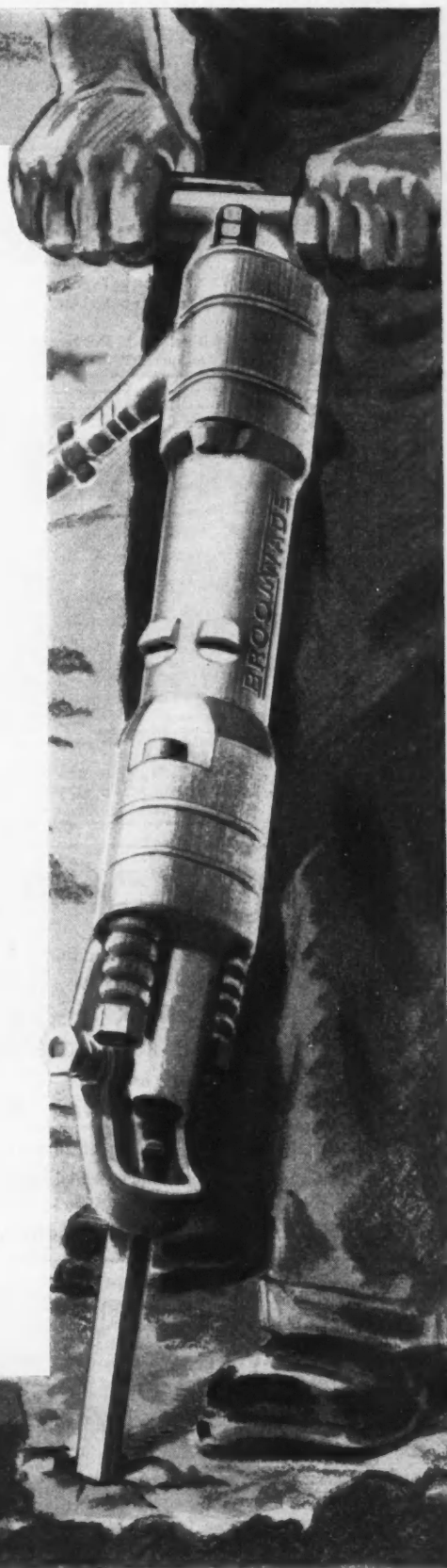
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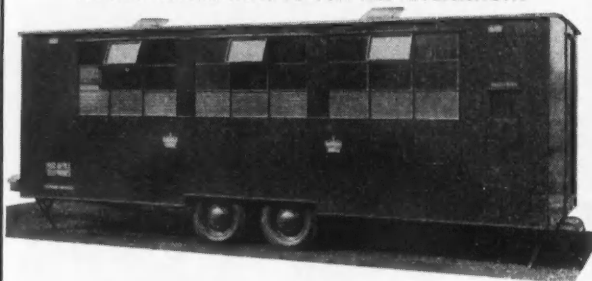


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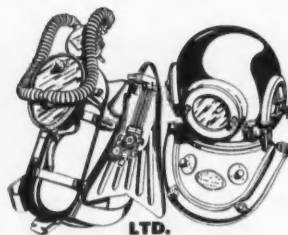
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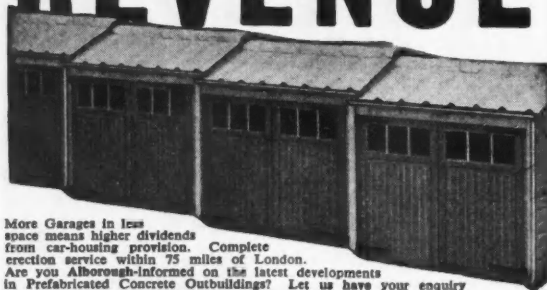
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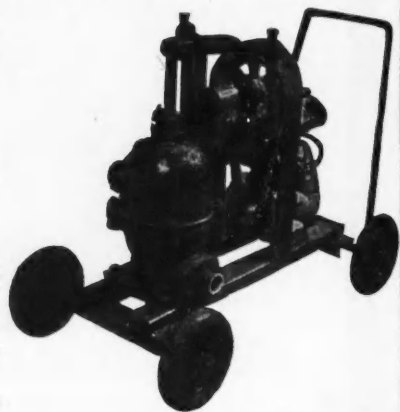
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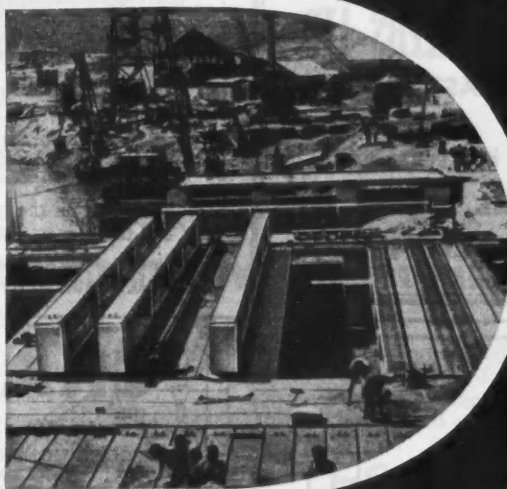
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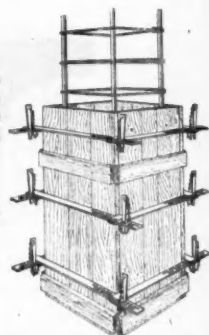
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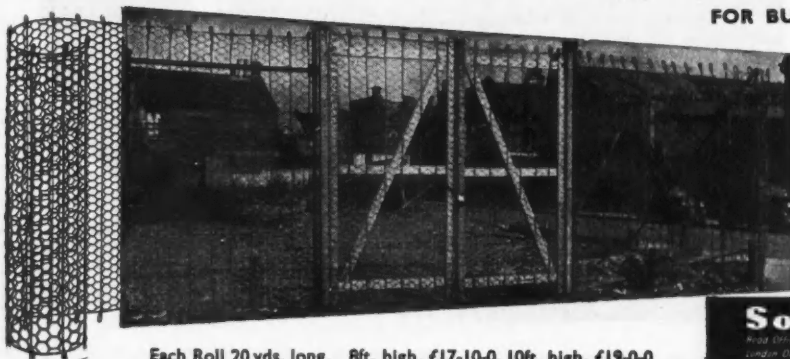
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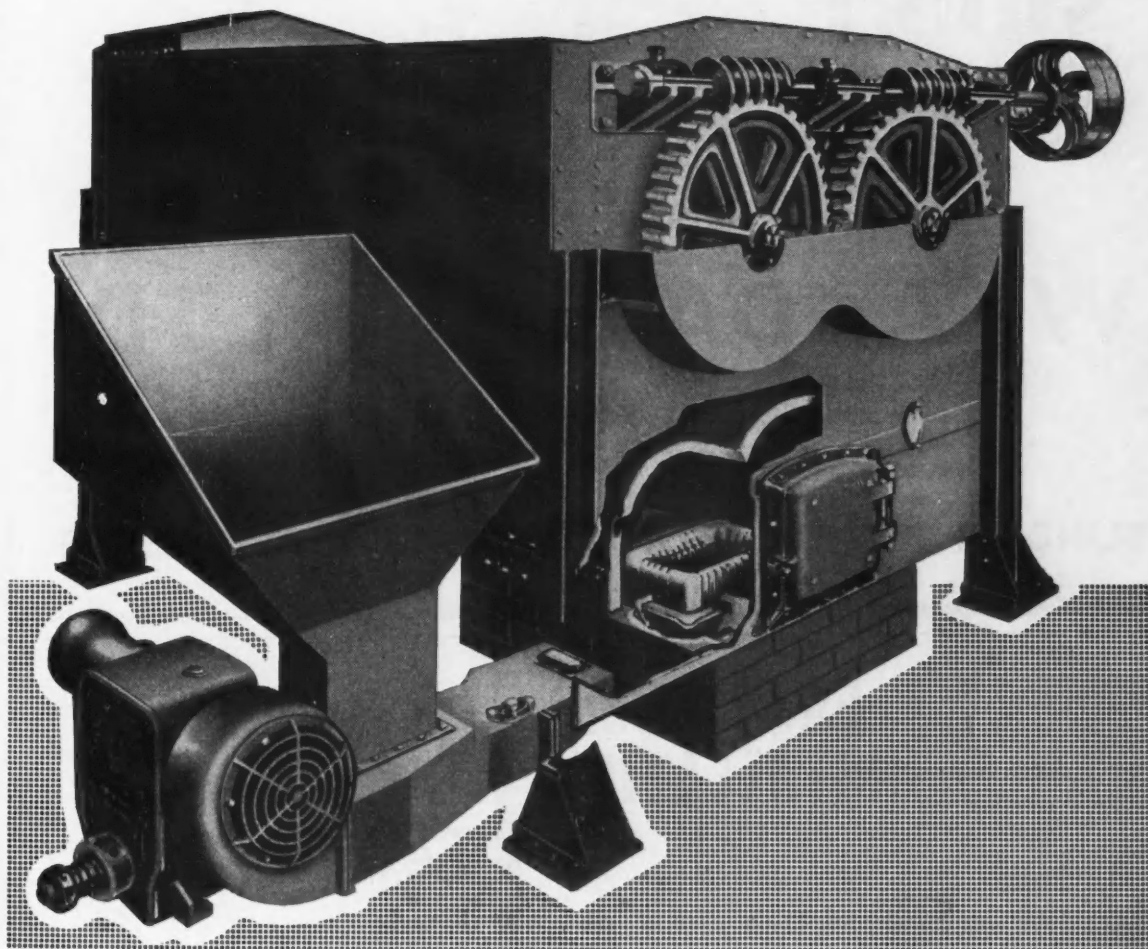
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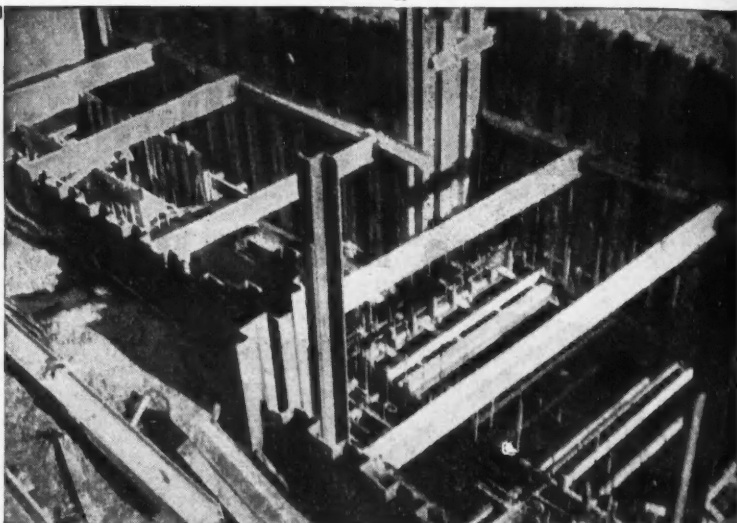
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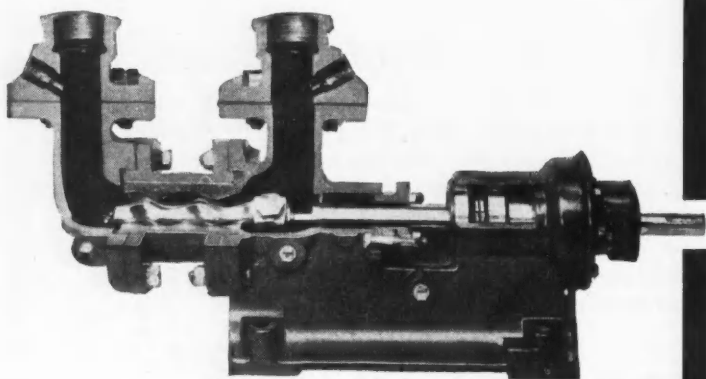
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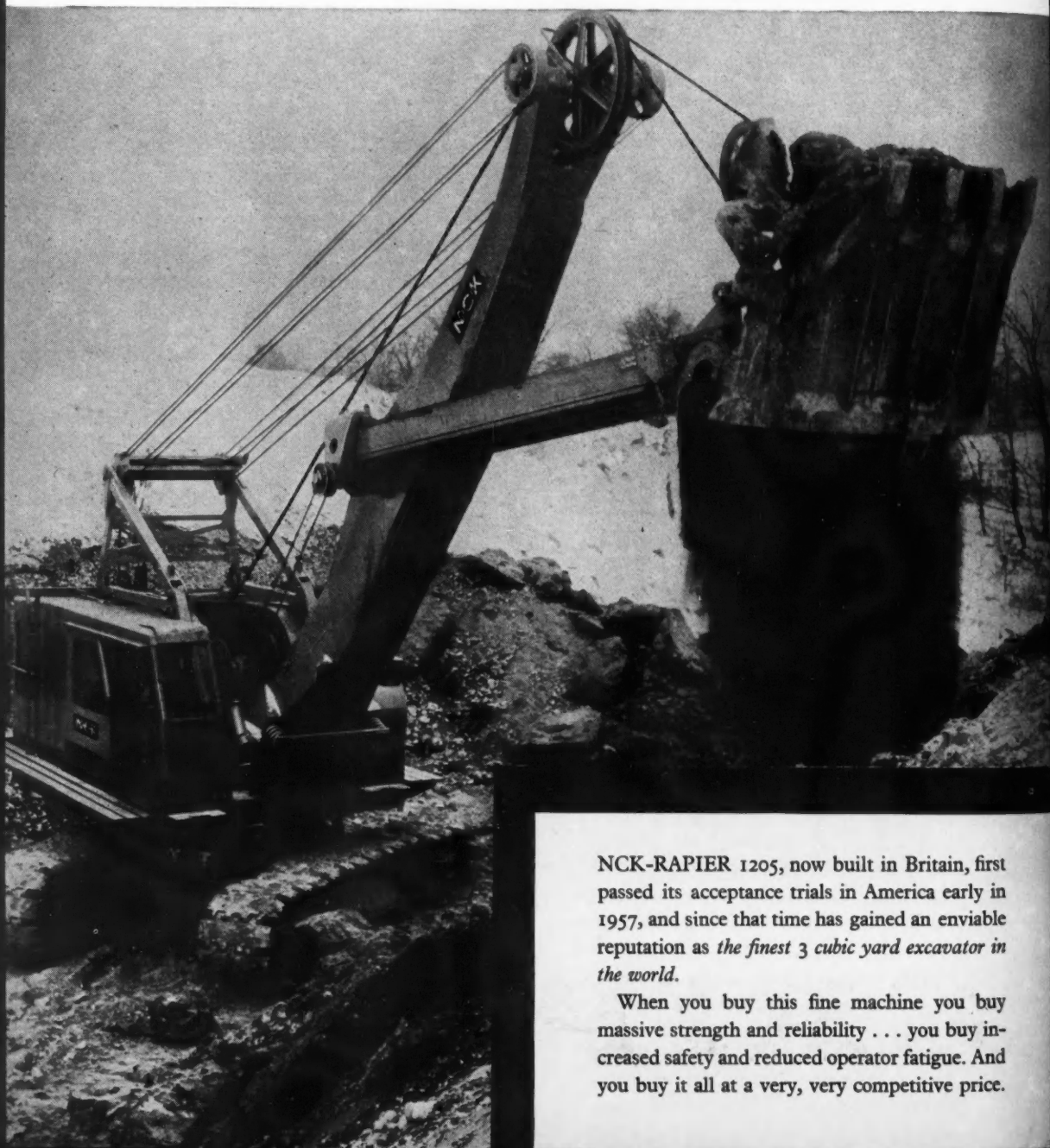
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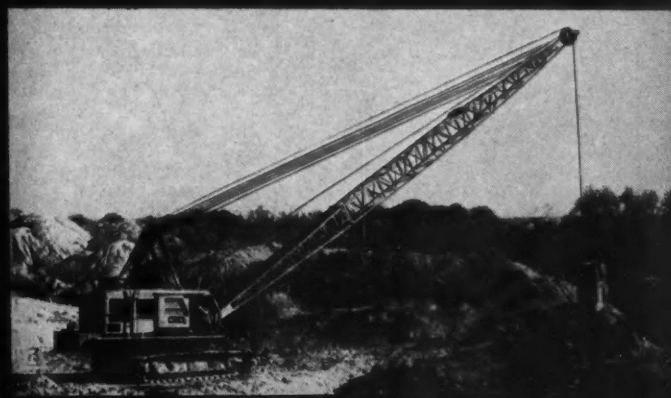
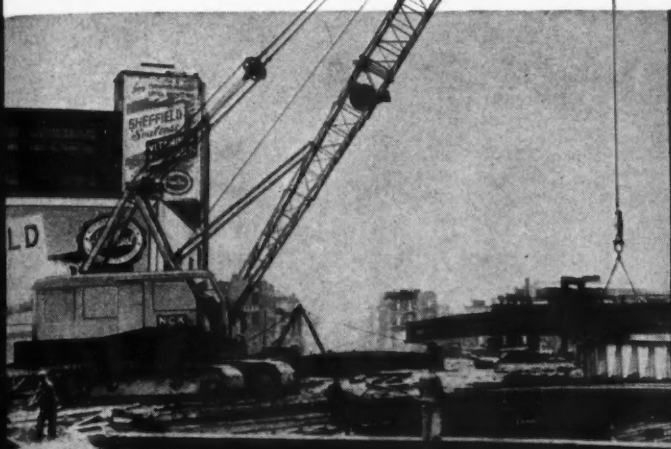
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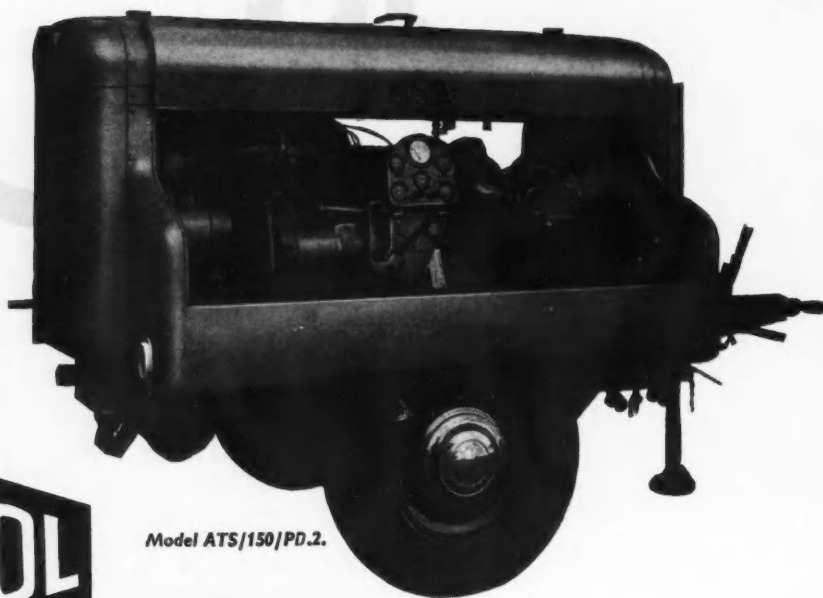
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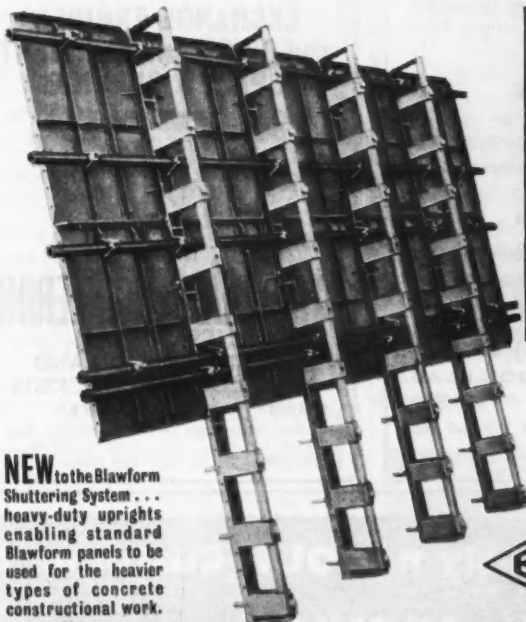
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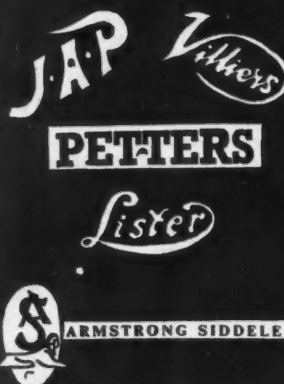
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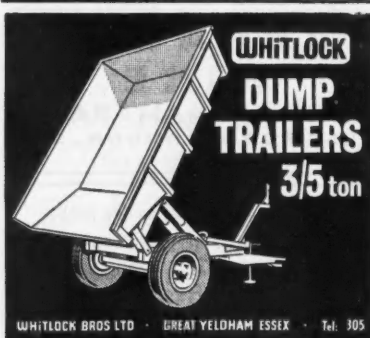
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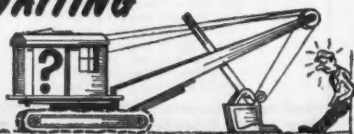
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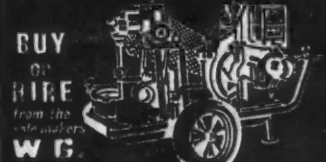
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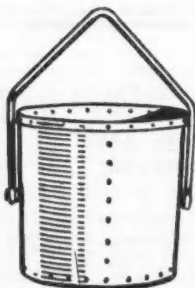
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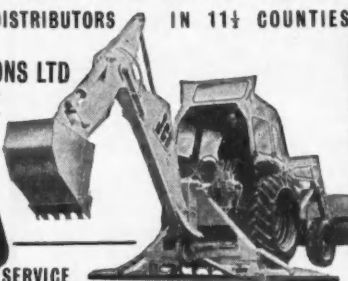
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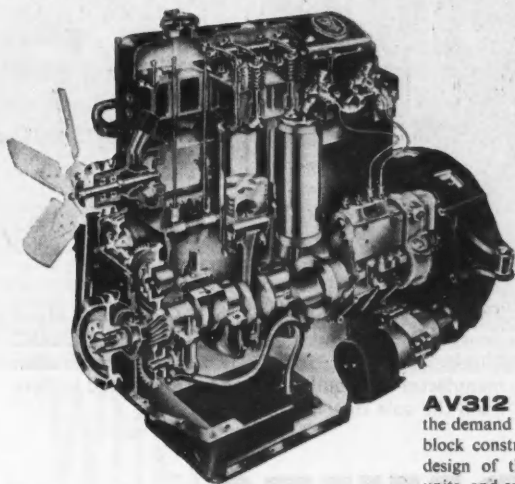
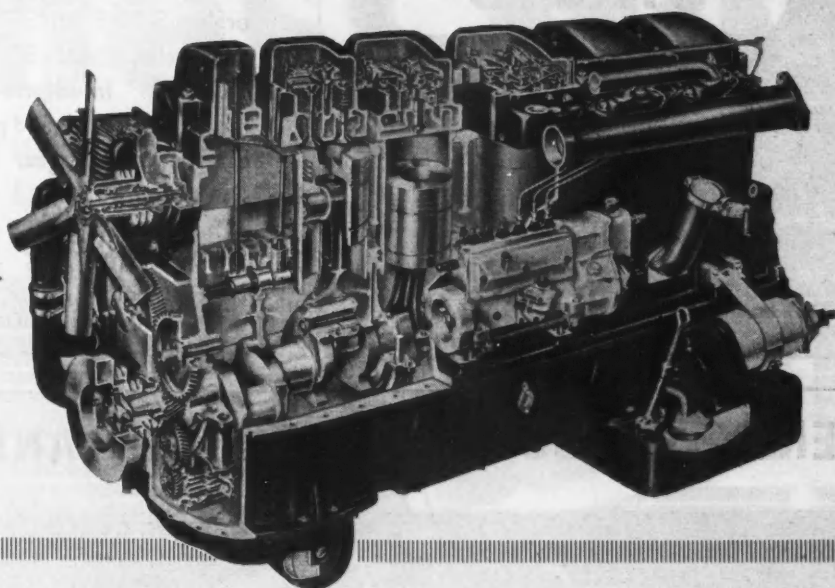
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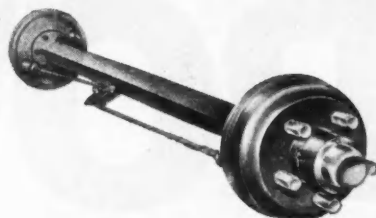
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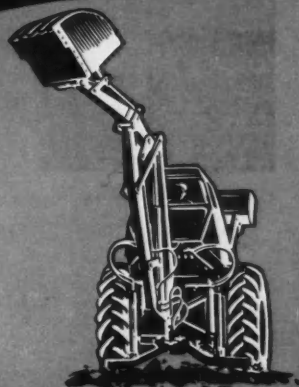
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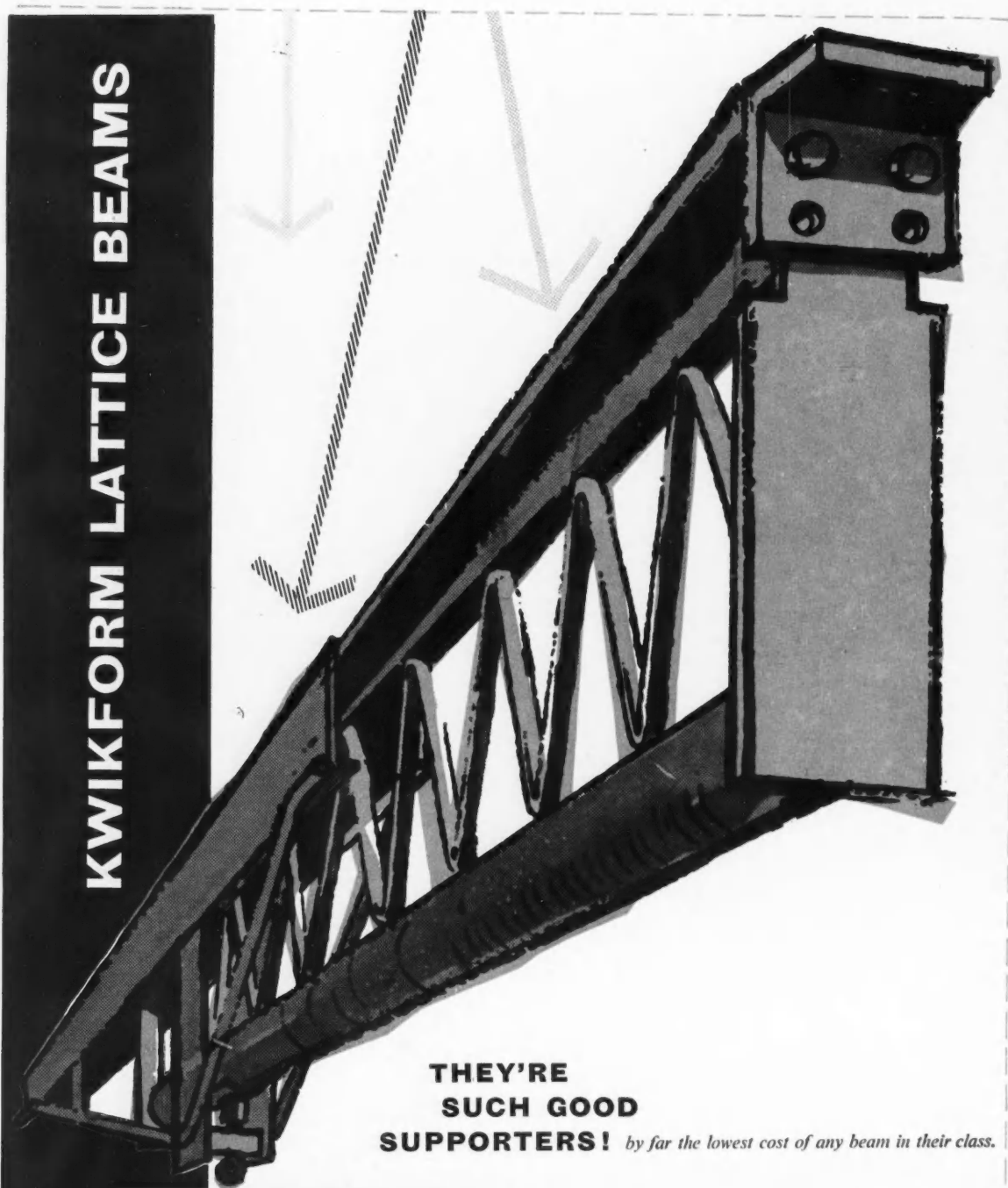
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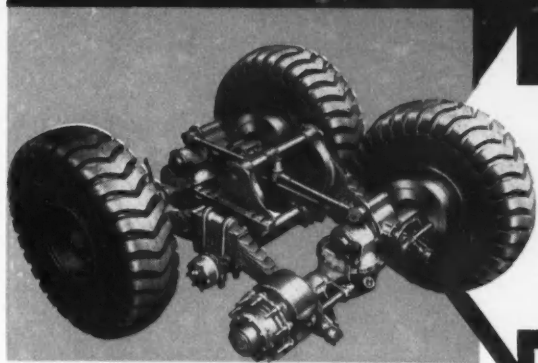
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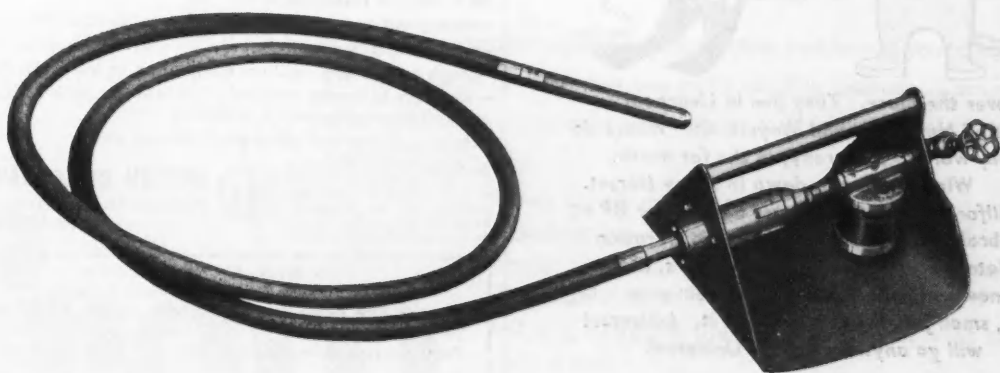
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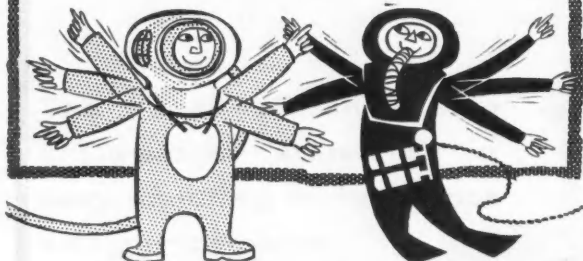


The Model AF.20 Pneumatic Internal Vibrator (as illustrated) is the most versatile of all air Vibrators. It can be supplied with five sizes of vibrator heads ranging from 1" dia. to 2½" dia. and flexible drives up to 24' long. By changing the heads the same Vibrator can be used for practically all concreting jobs on a site: for foundations, walls, columns, beams and floors. The AF.20 Vibrator is light in weight and economical in use. Owing to its high frequency of 12,000 r.p.m. it can consolidate the driest of concrete mixes, and the direct exhaust prevents "freezing" of the Vibrator even under the most arduous conditions.

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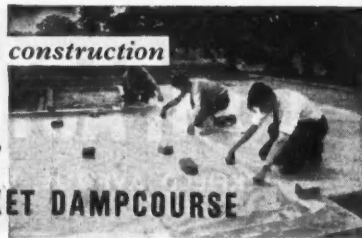
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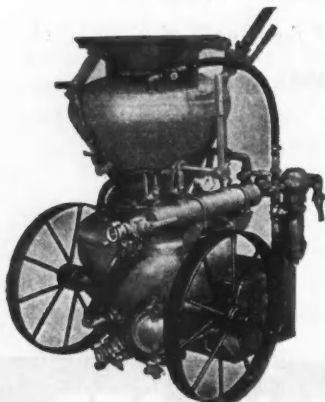
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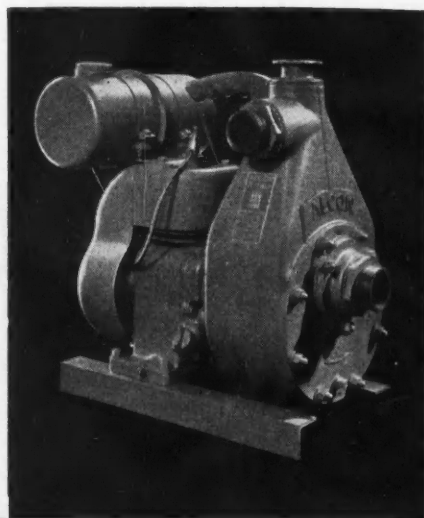
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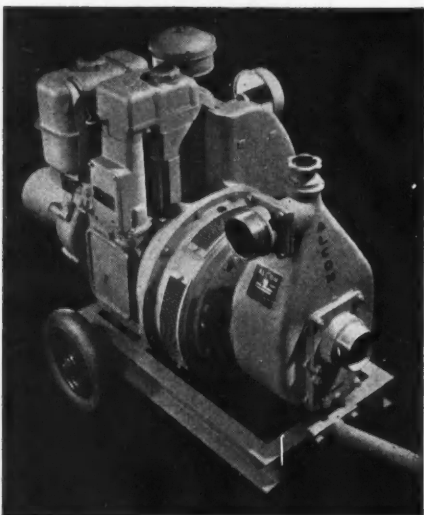
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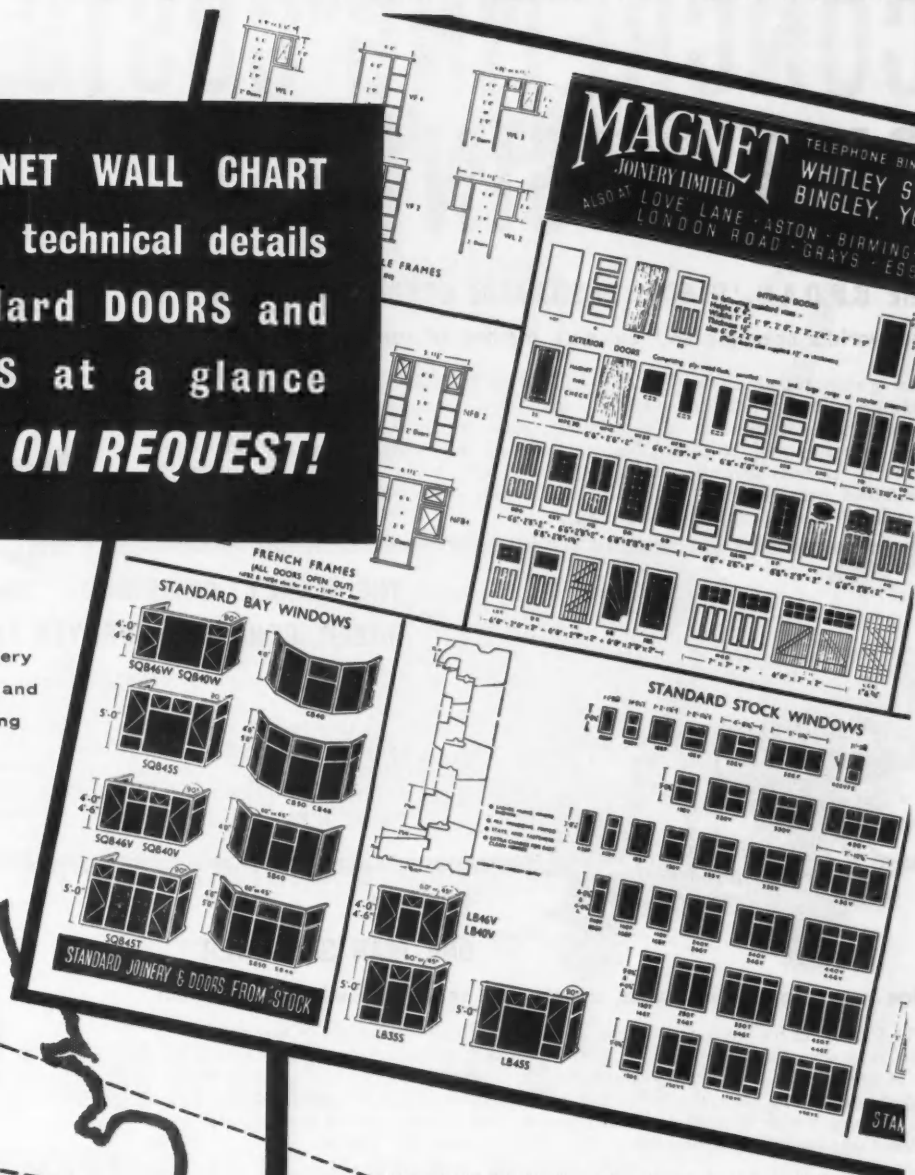
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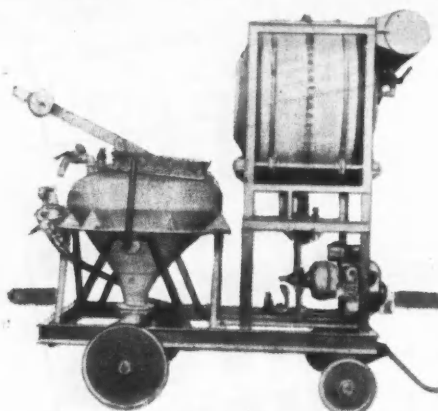


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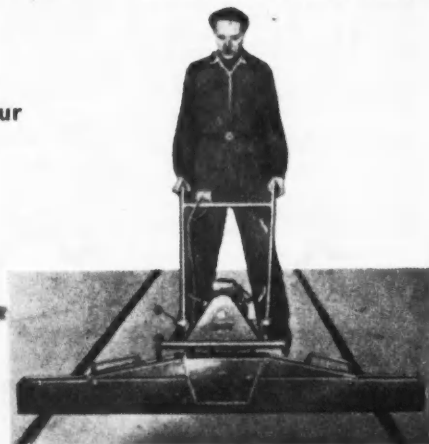


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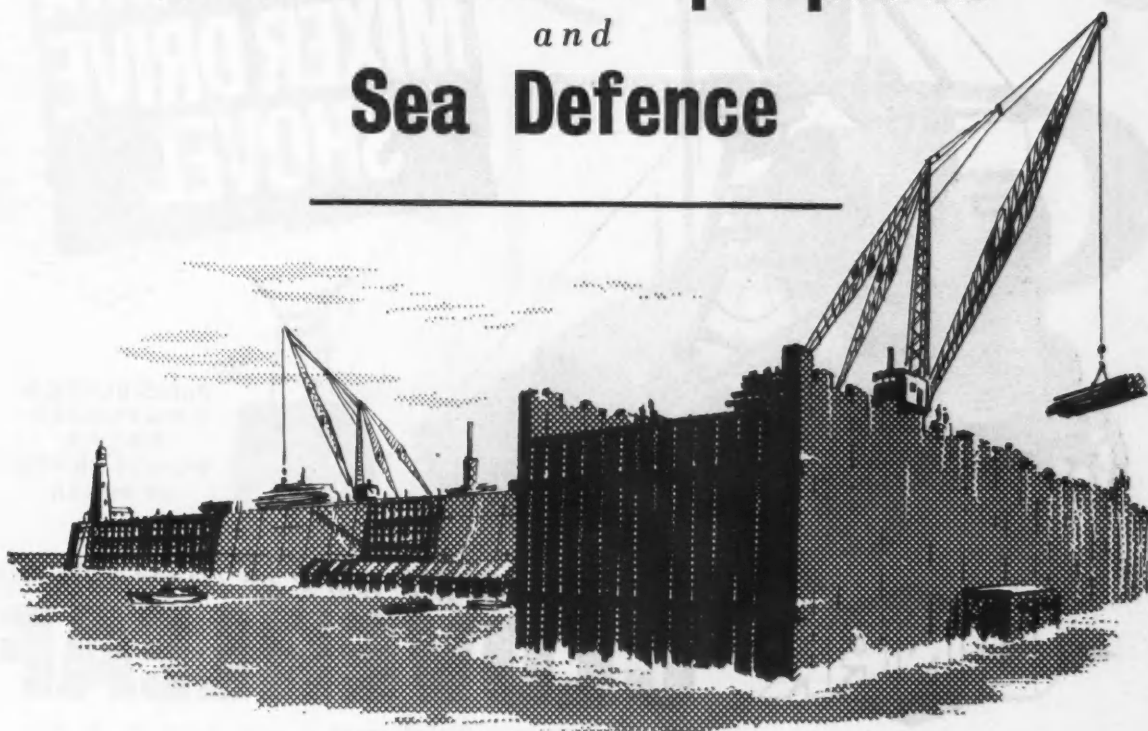
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**SHOVEL**



\* **PRESS-BUTTON  
CONTROLLED  
SHOVEL  
WINCH-DRIVEN  
BY MIXER**



*One man does the work of three with the*  
**CLOVERLEAF**

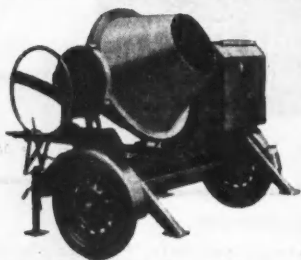
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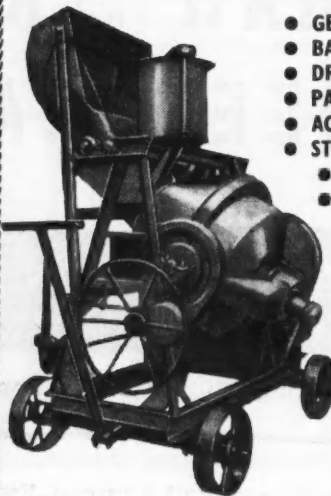
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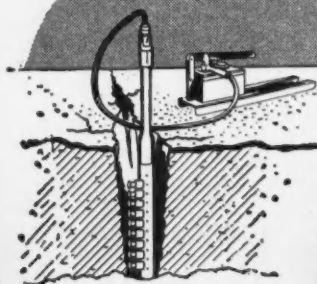
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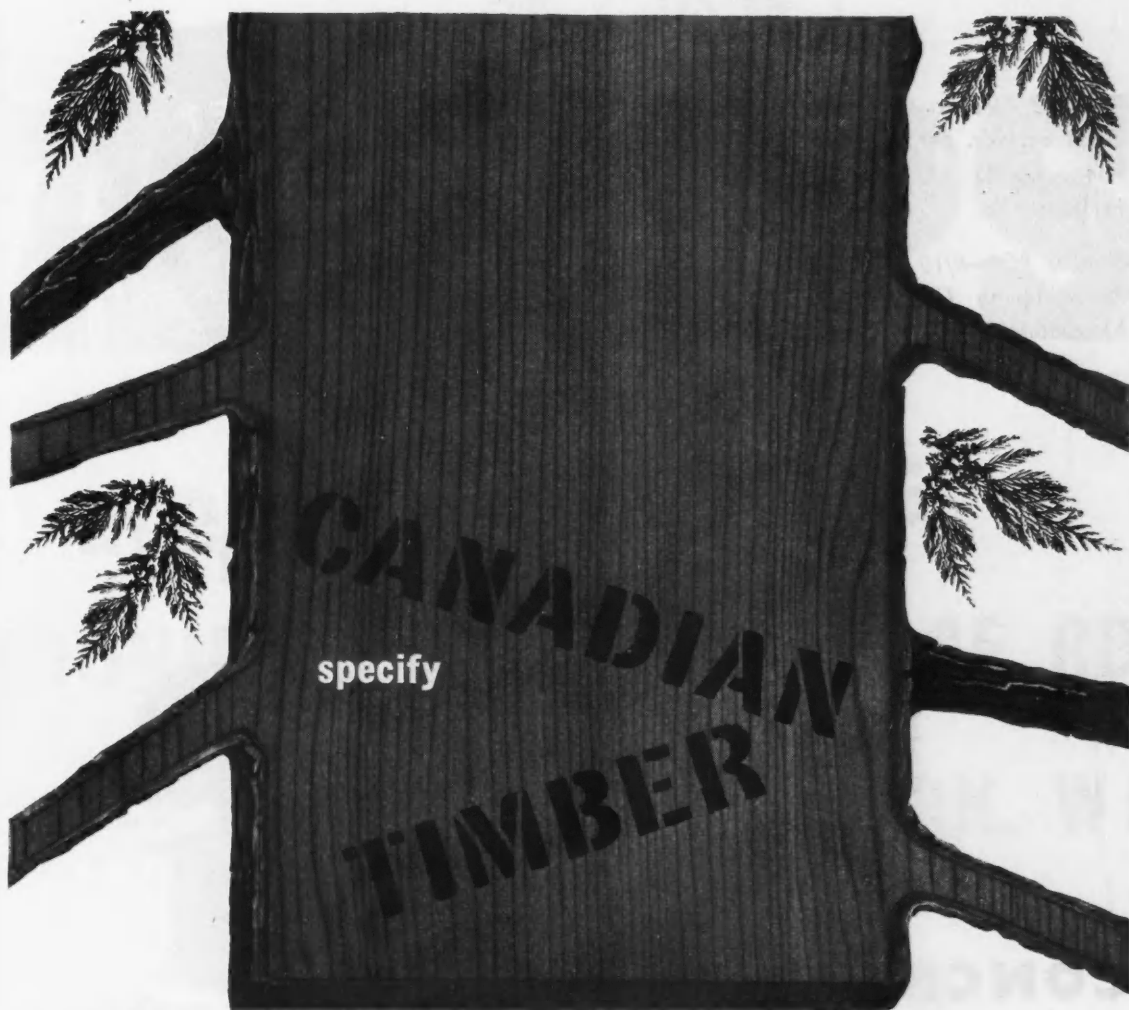


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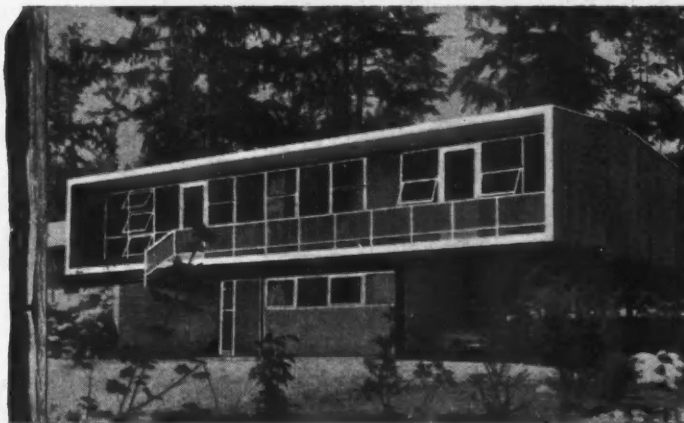
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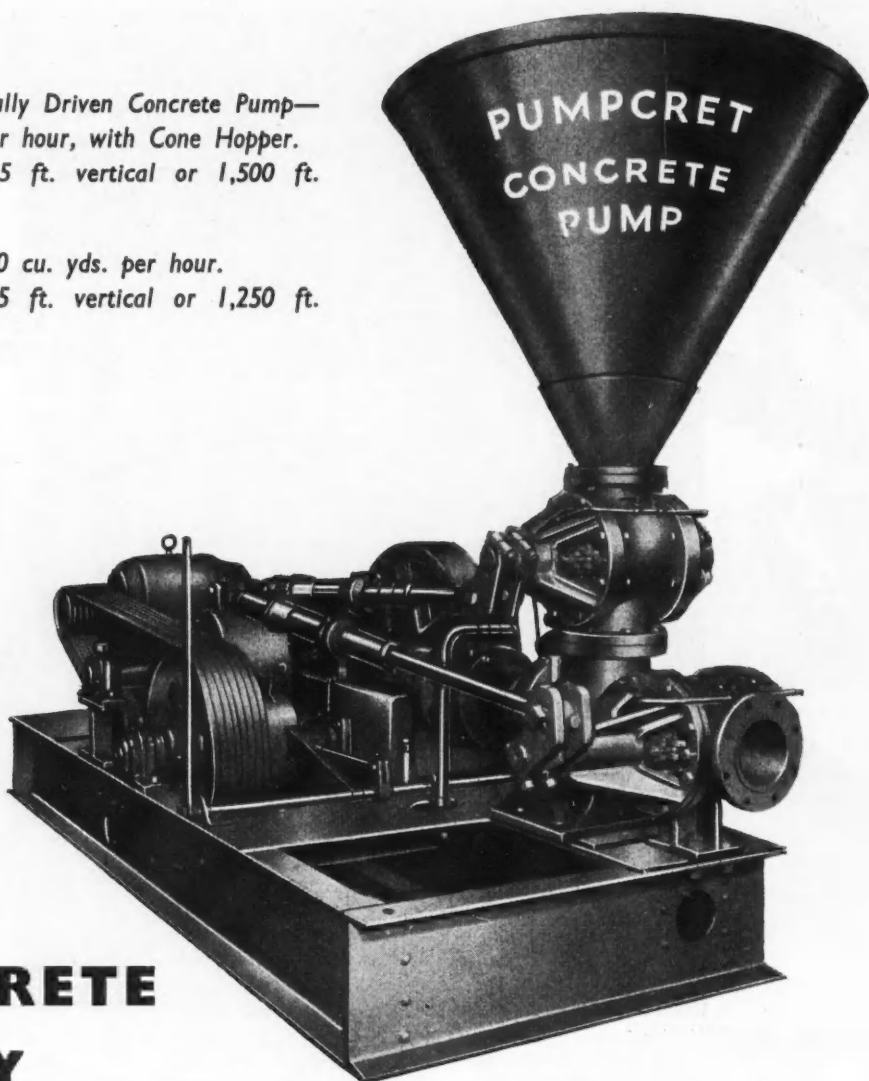
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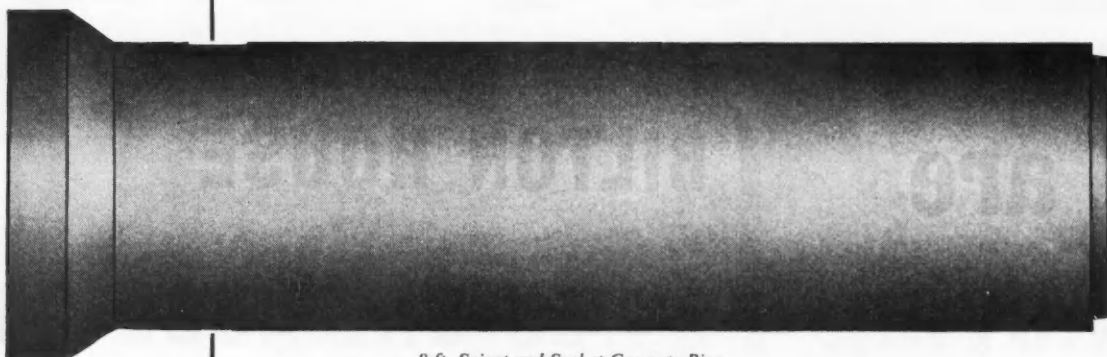
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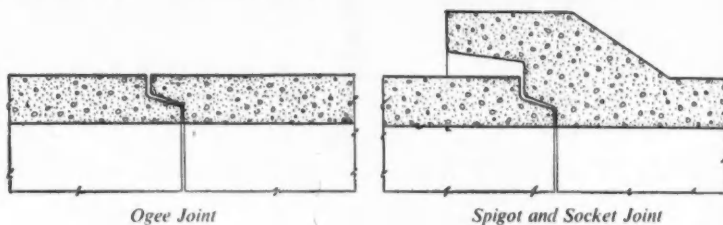
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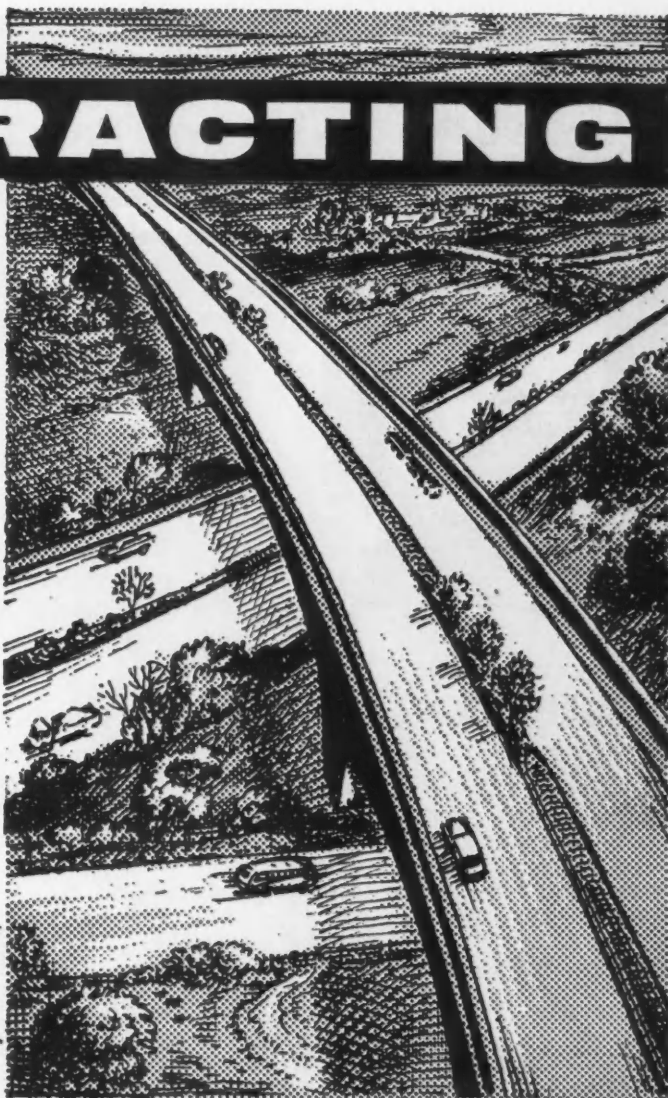
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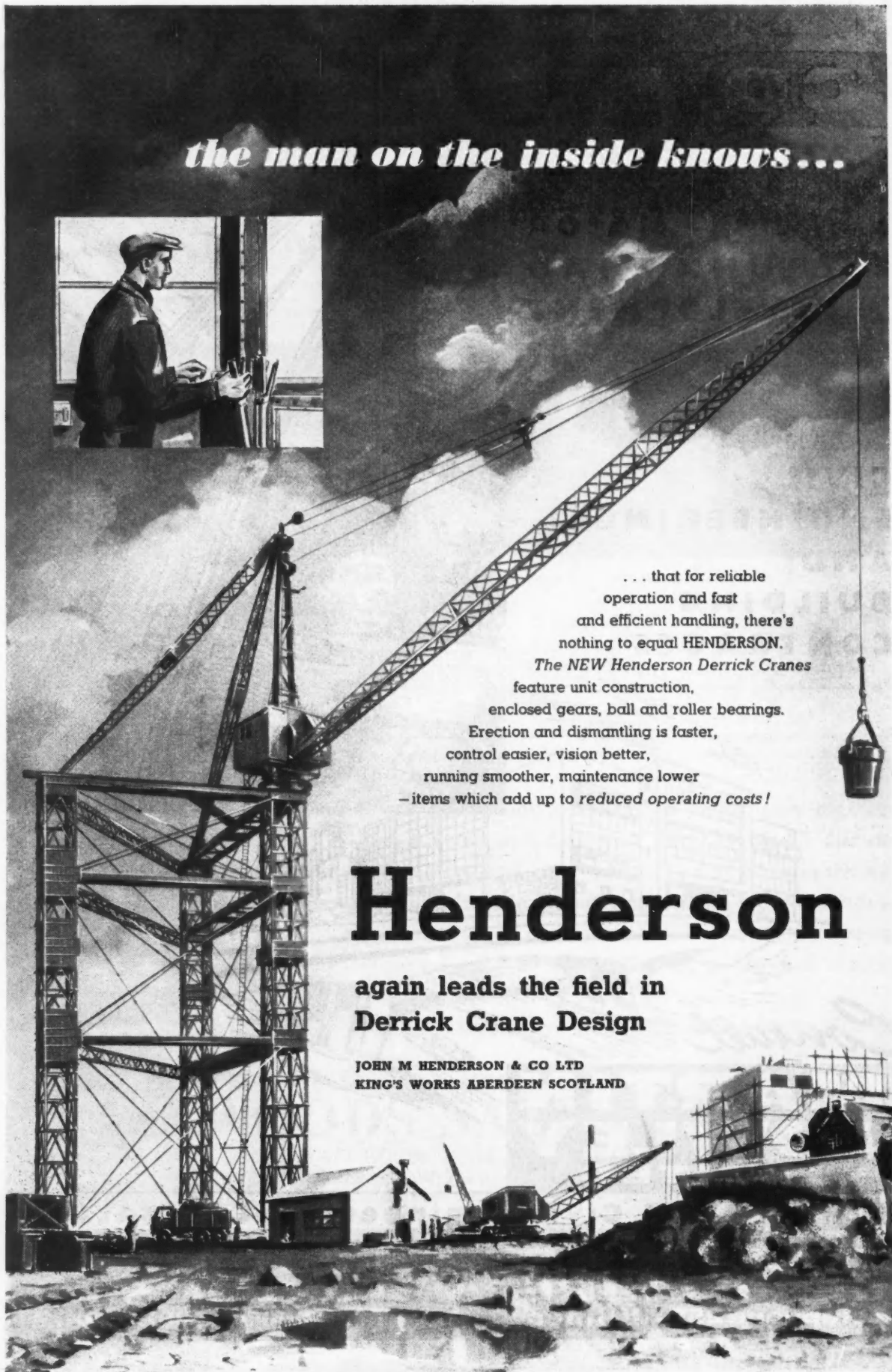
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- 244 lin. yd. Concrete Post and Chain Link Fencing.
- 24 lin. yd. Wooden Palisade Fencing.

Tender documents may be obtained from the County Surveyor, Denis Road, Bedford, on payment of a deposit of £2, returnable on receipt of a bona-fide Tender, which must be delivered to the undersigned on or before FRIDAY, 1st July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

GEORGE BREWIS,  
Clerk of the County Council.

Shire Hall,  
Bedford.  
June, 1960.

## FLINTSHIRE COUNTY COUNCIL

## SUPPLY OF ROAD MATERIALS.

TENDERS invited for SUPPLYING and DELIVERING to various depots approx. 1,000 tons total ROCK SALT, Grade 4, for snow clearing.

Forms of Tender, obtainable from the County Surveyor, County Buildings, Mold, must be returned to me, in the envelope provided, on or before 4th JULY, 1960.

W. HUGH JONES,  
Clerk of the County Council.

## BOROUGH OF BEBBINGTON.

## BEBBINGTON DRAINAGE—CONTRACT 5A.

TENDERS, on a FIXED-PRICE BASIS, are invited from experienced contractors for the CONSTRUCTION of approx. 2,400 lin. yd. of SEWERS, varying in dia. from 9in. to 15in., together with Associated Manholes and other appurtenant Works.

Copies of tendering documents obtainable from the Consulting Engineers, MESSRS. G. B. KERSHAW AND KAUFMAN, 82 Victoria Street, Westminster, S.W.1, upon deposit of Five Guineas (cheque payable Bebbington Corporation), to be refunded upon receipt of bona-fide Tender not withdrawn.

Drawings may be inspected at the office of Consulting Engineers or of Borough Engineer and Surveyor, Town Hall, Bebbington.

Tenders, endorsed "Tender—Bebington Drainage—Contract 5A," in plain sealed envelopes not indicating name, to be received by the undersigned by Noon on THURSDAY, 14th July, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

G. CHAPPELL,  
Town Clerk.

Town Hall,  
Bebington,  
Wirral,  
Cheshire.  
15th June, 1960.

## BOROUGH OF MIDDLETON.

## CONSTRUCTION OF PLAYING FIELD AT KIRKWAY.

TENDERS are invited for the CONSTRUCTION of a PLAYING FIELD of approx. One Acre in area.

The works comprise Soil Stripping, Excavation and Levelling, Topsoil Cultivation, Seed Bed Preparation and Sowing.

Drawings may be inspected, and copies of the Conditions of Contract, Specification, Bill of Quantities and Form of Tender may be obtained at the Office of the Borough Surveyor, Town Hall, Middleton, on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, endorsed "Playing Fields—Kirkway," to be delivered in plain sealed envelopes to the undersigned not later than Noon on SATURDAY, 9th July, 1960.

The Council does not bind itself to accept the lowest or any Tender.

F. JOHNSTON,  
Town Clerk.

Town Hall,  
Middleton,  
Near Manchester.  
June, 1960.

## BOROUGH OF GILLINGHAM.

## ERECTION OF 15 GARAGES, BARON CLOSE.

TENDERS are invited for the ERECTION of 15 LOCK-UP GARAGES at Baron Close, Gillingham.

Persons desirous of tendering may obtain copies of Specification and Form of Tender, and may inspect the Drawings and Conditions of Contract at the Borough Engineer's Department during usual office hours on and after the 20th June, 1960.

Applications should be accompanied by a cheque for Two Guineas (£2 2s.), made payable to Gillingham Corporation. This sum will be refunded on the receipt of a bona-fide Tender not subsequently withdrawn and on the return of all the documents issued.

Tenders to be returned in sealed envelope supplied, and endorsed "Fifteen Garages—Baron Close," must be delivered to the undersigned by not later than First Post on 1st JULY, 1960.

FRANK HILL,  
Town Clerk.

Municipal Buildings,  
Gillingham, Kent.  
10th June, 1960.

## URBAN DISTRICT COUNCIL OF TONBRIDGE.

## PRIVATE STREET WORKS—GREENTREES AVENUE.

TENDERS are invited for MAKING-UP a PART of GREENTREES AVENUE, 190yd. in length.

The Specification, Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor at the undermentioned address on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender and the return of all documents. Drawings may be inspected at the Office of the Engineer and Surveyor.

Tenders are to be delivered to the undersigned, in plain sealed envelopes endorsed "Greentrees Avenue," not later than Noon on MONDAY, 4th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

S. J. THORNE,  
Clerk of the Council.

Council Offices,  
Tonbridge Castle,  
Tonbridge.  
6th June, 1960.

## CONTRACTS

## BOROUGH OF UXBRIDGE.

## CONTRACT NO. 450.

PROPOSED SURFACE WATER DRAINAGE AT:  
CLAMMAS WAY, COWLEY.  
HAREFIELD ROAD, UXBRIDGE.  
MICAVER ROAD, HILLINGDON.

The Borough Council invite contractors with wide experience of similar work to TENDER for the ABOVE CONTRACT.

The works will comprise the Laying of approx. 250 lin. yd. of 18in. and 15in. Concrete Tubes and 850 lin. yd. of 12in. and 9in. Glazed Stoneware Pipes, together with Manholes and ancillary works. Bills of Quantities and other Contract documents are obtainable from HAROLD E. G. STRIPP, A.M.I.C.E., Borough Surveyor, 263 High Street, Uxbridge. Tenders are to be delivered to the undersigned by 10 a.m. on THURSDAY, 7th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

E. RONALD WEST,  
Town Clerk.

Council Offices,  
263 High Street,  
Uxbridge, Middx.

## CITY OF SALFORD.

## PROPOSED CARETAKER'S HOUSE AT ST. ALBERT R.C. SECONDARY MODERN SCHOOL, BRITANNIA STREET, SALFORD, 6.

FIRM-PRICE TENDERS are invited for the PROPOSED CARETAKER'S HOUSE at St. Albert R.C. Secondary Modern School, Britannia Street, Salford, 6. Conditions of Contract and Drawings may be inspected at, and Bill of Quantities and Form of Firm-price Tender obtained from, the City Engineer and Surveyor's Department, Town Hall, Salford, 3, on payment of a deposit of £2 2s., which will be returned on submission of a bona-fide Firm-price Tender not subsequently withdrawn.

Firm-price Tenders, in plain sealed form, sealed in the envelope provided and bearing no other mark or identification, must be forwarded to the undersigned so as to be received not later than 10 a.m. on TUESDAY, 12th July, 1960.

The Council does not bind itself to accept the lowest or any Firm-price Tender.

R. RIBBLEDALE THORNTON,  
Town Clerk.

## CITY OF ROCHESTER.

## CONSTRUCTION OF 4 PEDESTRIAN CROSSINGS: COMMERCIAL ROAD (2), STROOD HIGH STREET, NORTH STREET.

FIXED-PRICE TENDERS are invited for the CONSTRUCTION OF FOUR PEDESTRIAN CROSSINGS at Commercial Road (2), Strood High Street, and North Street.

The Drawings and General Conditions of Contract may be inspected at the City Surveyor's Department, 66 Maidstone Road, Rochester, during normal working hours. The Form of Tender, General and Special Conditions of Contract, Amendments to the Ministry of Transport Specification for Road and Bridge Works, and Bill of Quantities may be obtained at the above address on payment of a deposit of £2 2s., which will be refundable on the acceptance of a bona-fide Tender.

Tenders, in a plain sealed envelope endorsed "Construction of Pedestrian Crossings—Commercial Road (2), Strood High Street and North Street," must be received by the undersigned not later than 5 p.m. on FRIDAY, 8th July, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

PHILIP H. BARTLETT,  
Town Clerk.

Guildhall,  
Rochester, Kent.  
8th June, 1960.

## CITY OF ROCHESTER.

## WIDENING OF MANOR LANE, BORSTAL (SECTION 2).

FIXED-PRICE TENDERS are invited for BREAKING OUT THE EXISTING TARMACADAM CARRIAGEWAY, PROVIDING AND LAYING approx. 1,050 sq. yd. of TARMACADAM CARRIAGEWAY on HARDCORE FOUNDATION, and various Kerbing, Paving, Fencing and Surface Water Drainage Works at the ABOVE.

The Drawings and General Conditions of Contract may be inspected at the office of I. A. PEEL, ESQ., A.M.I.C.E., M.I.Mun.E., City Surveyor, 66 Maidstone Road, Rochester, during normal working hours. The Form and Conditions of Tender, Special Conditions of Contract, Specification and Bill of Quantities may be obtained at the above address on payment of a deposit of £2 2s., which will be refundable on the acceptance of a bona-fide Tender.

Tenders, in a plain sealed envelope endorsed "Tender for Widening of Manor Lane (Section 2)," must be received by the undersigned not later than 12 Noon on FRIDAY, 15th July, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

PHILIP H. BARTLETT,  
Town Clerk.

Guildhall,  
Rochester,  
Kent.  
9th June, 1960.

## PRESCOT URBAN DISTRICT COUNCIL.

## HIGHWAYS ACT, 1959.

## PRIVATE STREET WORKS.

TENDERS are invited for the MAKING-UP of the UNDERMENTIONED ROADWAYS:—

- (1) Knowsley Park Lane, length 1,445ft.
- (2) Stanley Crescent, length 474ft.
- (3) Chorley Road, length 407ft.
- (4) Westbrook Avenue, length 370ft.

Drawings and Conditions of Contract may be inspected and Bills of Quantities, Specifications and Form of Tender may be obtained from Messrs. GORNALL, KELLY AND PARTNERS, of 155 The Albany, Old Hall Street, Liverpool, 3, on payment of Two Guineas in respect of each roadway, which will be returned on receipt of a bona-fide Tender. Contractors should state whether documents are required for all or any particular contract, and may so tender.

Tenders, in a plain sealed envelope, must be delivered to the Clerk of the Council, Council Offices, Prescott, Lancs., not later than FRIDAY, the 1st July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. LAMBERT,  
Clerk of the Council.

Council Offices,  
Prescott,  
Lancashire.  
10th June, 1960.

## CONTRACTS

## EAST SUSSEX COUNTY COUNCIL.

## PRIVATE STREET WORKS.

FIXED-PRICE TENDERS are invited for the MAKING-UP and SEWERING of ROADS at EAST SALTDEAN (Contract 2), which include the Construction of approx. 19,794 sq. yd. of 6in. Reinforced Concrete Carriageways, 6,226 lin. yd. of Foul and Surface Water Sewers of 9in. and 6in. dia., the Provision of Kerbs, Tarmacadam Footways and other ancillary Works.

The Drawings and Conditions of Contract may be inspected at the offices of, and the Forms of Tender, Specification and Bills of Quantity may be obtained from the undersigned on application on receipt of a deposit of £5 5s., which will be returned on receipt of a bona-fide Tender and the return of all documents.

Tenders (together with all documents) in a plain sealed envelope endorsed "Tender for Private Street Works (15)," are to be delivered not later than 12 Noon on FRIDAY, 15th July, 1960, addressed to the Clerk of the East Sussex County Council, County Hall, Lewes.

The Council does not bind itself to accept the lowest or any Tender.

M. C. LENEY,  
County Surveyor.

County Hall,  
Lewes.

## BOROUGH OF WARWICK.

## EAST END CLEARANCE AREA—PHASE I.

## ERECTION OF HOUSES AND BUNGALOWS.

TENDERS are invited for the CONSTRUCTION of the FOLLOWING:

- 13 Single-bedroom Terraced Bungalows in Four Blocks.
- 14 Three-bedroom Terraced Houses in Four Blocks.

Approx. 340yd. of 16ft. Carriageway, Ancillary Drainage, Site Paths, Six Garages, and Demolition of existing Buildings.

Copies of the Bills of Quantities, General Conditions, and Form of Tender may be obtained from the Borough Engineer on payment of £2 2s. deposit, which will be refunded upon receipt of a bona-fide Tender. Drawings may be seen at the Office of the Borough Engineer during normal working hours.

Tenders, in plain sealed envelopes endorsed "East End Clearance Area—Phase I," must be delivered to the Borough Engineer and Surveyor, 23 Jury Street, Warwick, not later than First Post on the 5th JULY, 1960.

H. B. DOLPHIN, M.C., T.D., M.A.,  
Town Clerk.

9th June, 1960.

## BOROUGH OF WIDNES.

## CROW WOOD RECREATION GROUND—

## PORTION 2.

TENDERS are invited from experienced specialist contractors for the LAYING-OUT, CULTIVATION, PREPARATION AND SEEDING of approx. Six Acres of the ABOVE RECREATION GROUND, including the Construction of a Crown Green Bowling Green, Two Hard Tennis Courts with Stop Nets, a Children's Playground with Equipment and various Tarmacadam Paths, Drainage and ancillary works, and the Planting of Trees and Shrubs.

Plans, Specification, Bills of Quantities and Form of Tender may be obtained from MR. A. I. KNIGHT, A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, Town Hall, Widnes, on payment of a deposit of £2 2s., refunded on receipt of a bona-fide Tender.

Tenders, enclosed in envelope provided, to be received not later than 12 Noon on MONDAY, 4th July, 1960.

The Council does not bind itself to accept the lowest or any Tender.

FRANK HOWARTH,  
Town Clerk.

Town Hall,  
Widnes.

## BRAINTREE AND BOCKING URBAN DISTRICT COUNCIL.

## CODHAM MILL WATER SCHEME.

## CONTRACT NO. 8—PIPELAYING.

The Council invites TENDERS from experienced public works contractors, who specialise in pipelaying, for the LAYING OF approx. 5½ miles of 9in., 10in., 15in. and 21in. SPUN-IRON PIPES, with Flexible Joints, and the Construction of ancillary works.

The General Conditions of Contract, Specification, Bill of Quantities, Form of Tender and Drawings, prepared by the Consulting Engineers, MESSRS. HERBERT LAPHWORTH PARTNERS, 25 Victoria Street, Westminster, S.W.1, may be obtained from the undersigned on or after MONDAY, 27th June, 1960, on payment of a cheque for £10 made out in favour of the Council, which amount will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

The Tender is to be returned, addressed to the undersigned, in a sealed envelope endorsed "Tender for Codham Mill Water Scheme—Contract No. 8," and to reach the Town Hall on before Noon on MONDAY, 25th July, 1960.

The Council does not bind itself to accept the lowest or any Tender.

W. BALSON,  
Clerk of the Council.

Town Hall,  
Braintree,  
Essex.

## IRWELL VALLEY WATER BOARD.

## 15IN. DIA. WATER MAIN.

TENDERS are invited for the LAYING OF approx. 4,400yd. of 15in. dia. SPUN-IRON PIPES, together with ancillary work, from HILLOCK, Whitefield, to CLARKE'S HILL RESERVOIR, Radcliffe.

Plans, Specifications, Bills of Quantities and Forms of Tender may be obtained on application to MR. R. WYLLIE, M.I.C.E., Engineer and Manager, Parsons Lane, Bury, on payment of a deposit of £2 2s., which will be returned on the receipt of a bona-fide Tender.

Tenders, enclosed in a plain sealed envelope bearing no name or mark to indicate the sender, and endorsed "Tender for Water Main," must be forwarded to the Engineer and Manager, to arrive not later than 12 Noon on MONDAY, 25th July, 1960.

The Board do not bind themselves to accept the lowest or any Tender.

HAROLD PICKUP,  
Clerk and Treasurer.

Parsons Lane,  
Bury, Lancs.  
6th June, 1960.

## CONTRACTS

## COUNTY COUNCIL OF DURHAM.

TENDERS invited for SUPPLY of METALWORK MACHINES and EQUIPMENT to various SCHOOLS. Forms of Tender, returnable by 15th JULY, 1960, and details from undersigned.

G. H. METCALFE,

Director of Education.

Shire Hall,  
Durham,  
13th June, 1960.

## BEDFORDSHIRE COUNTY COUNCIL.

BEDFORD TO AMPHILL ROAD, A.418.

COW BRIDGE SECTION.

TENDERS are invited for the WIDENING and REALIGNMENT of the ABOVE ROAD in the vicinity of COW BRIDGE, over a length of 900yd. The works consist of Earthworks, Concrete Haunching and Channelling, Lean-mix Concrete Foundations, Tarmac and Asphalt Surfacing, Bridge and Culvert Works and Drainage.

Copies of the Conditions of Contract, Specification and Bill of Quantities can be obtained from the County Surveyor, Dents Road, Bedford, on payment of Two Pounds deposit, which will be refunded on receipt of a bona-fide Tender or return of the documents before the closing date. The Drawings may be examined at the above Office by appointment during working hours. Tenders must be returned to me by FRIDAY, 8th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender which may be received.

GEORGE BREWIS,

Clerk of the County Council.

Shire Hall,  
Bedford,  
June, 1960.

## COUNTY BOROUGH OF DUDLEY.

STREET LIGHTING—THIRD YEAR PROGRAMME.

Applications to TENDER are invited for the ABOVE CONTRACT which provides for an IMPROVED LIGHTING INSTALLATION on VARIOUS ROADS within the Borough.

The majority of the work consists of the Provision and Erection of 705 Group "B" Stanton Prestressed Concrete Columns, 90 Group "B" Tubular Steel Columns, and 10 Group "A" Lighting Points with Mercury and sodium Lamps, together with all necessary Lanterns and Control Gear.

Applications must be submitted to the Borough Engineer, The Council House, Dudley, Worcs., together with a deposit of £5 5s., which will be returned on receipt of a bona-fide Tender, not subsequently withdrawn, and the return of all documents.

The latest date for the receipt of applications is FRIDAY, 24th June, 1960, and tender documents will be forwarded as soon as possible after that date.

P. D. WADSWORTH,

Town Clerk.

The Council House,  
Dudley, Worcs.,  
11th June, 1960.

## BOROUGH OF UXBRIDGE.

TENDERS are invited from experienced firms for the PAINTING of LAMP STANDARDS, BEACON POSTS and SEWER VENT COLUMNS within the Borough.

The Specification, etc., may be obtained from the Borough Surveyor, 263 High Street, Uxbridge, Middlesex, on payment of £2 2s., returnable on receipt of a bona-fide Tender.

Tenders must be returned to the undersigned, in a sealed envelope endorsed "Public Lighting," by Noon, THURSDAY, 7th July, 1960.

E. RONALD WEST,

Town Clerk.

Council Offices,  
265 High Street,  
Uxbridge, Middx.

## BOROUGH OF ABERYSTWYTH.

RECONSTRUCTION, RESTORATION AND ADDITIONS TO THE TOWN HALL, ABERYSTWYTH.

TENDERS are invited from building contractors for the ABOVE WORK.

Application to Tender should be made to the Architect, S. COLWYN FOLKES, Merton Place, Penlycrochan Avenue, Colwyn Bay, North Wales (telephone 2731), from whom the Specification, Bill of Quantities and Form of Tender may be obtained on payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender.

Plans may be inspected at the office of the Town Clerk, Town Hall, Aberystwyth, and at the office of the Architect.

Tenders, in plain sealed envelopes endorsed "Tender for Town Hall," should be received by the Town Clerk not later than FRIDAY, 15th July, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

W. PHILIP DAVIES,

Town Clerk.

Town Hall,  
Aberystwyth,  
13th June, 1960.

## CREDITON RURAL DISTRICT COUNCIL.

CHERITON BISHOP AND CHERITON CROSS SEWERAGE AND SEWAGE DISPOSAL.

TENDERS are invited from competent contractors, having experience of similar work, for the LAYING of 290 lin. vd. of 9in., and 2,400 lin. vd. of 6in. SPUN-IRON and GLAZED STONEWARE SEWERS, together with Concrete Manholes, the Construction of a Small Pumping Station, a Sewage Disposal Works, and all ancillary works.

Contractors wishing to submit a Tender on a Fixed-price Basis (i.e., without the inclusion of Cost Variation Clauses for Labour and Materials) should apply to the Council's Consulting Engineers, MESSRS. HARVEY, MCGLAND AND HAYES, 8 Richmond Road, Exeter, from whom copies of the Specification, Bill of Quantities and Form of Tender may be obtained on and after FRIDAY, 1st July, on payment of a deposit of £5 5s., by cheque, made payable to Crediton Rural District Council.

The deposit will be refunded to contractors who submit bona-fide Tenders not subsequently withdrawn, accompanied by priced Bill of Quantities, and after the return of all documents and Drawings.

Sealed Tenders, endorsed "Cheriton Bishop and Cheriton Cross Sewerage," but bearing no name or mark identifying the sender, are to be delivered to the undersigned not later than 10 a.m. on SATURDAY, 23rd July, 1960.

The Council do not bind themselves to accept the lowest or any Tender they may receive.

A. J. MADGE,

Clerk.

Council Offices,  
Union Terrace,  
Crediton, Devon.

## CONTRACTS

## BOROUGH OF BRIDPORT.

GROUP "B" STREET LIGHTING.

The Council are prepared to consider TENDERS for the SUPPLY and ERECTION of 26 STEWARTS and LLOYDS TUBULAR STEEL-PLATED COLUMNS and 125-WATT MERCURY VAPOUR DISCHARGE LAMPS and ancillary Works for Group "B" Lighting at NORTH ALLINGTON.

Form of Tender, Specification and Bill of Quantities may be obtained upon receipt of a deposit of £2 2s. (Two Guineas) from the Borough Engineer, Municipal Offices, South Street, Bridport, where Drawings and Conditions of Contract may be inspected.

Tenders, including all documents, should be returned to the undersigned in a plain sealed envelope endorsed "Street Lighting—North Allington," not later than SATURDAY, 30th July, 1960.

The Council are not bound to accept the lowest or any Tender.

F. C. M. FORWARD,

Town Clerk.

Municipal Offices,

Bridport,

June, 1960.

## BOROUGH OF COLWYN BAY.

MOCHDRE INDUSTRIAL DEVELOPMENT SITE.

CONSTRUCTION OF ROADS AND SEWERS.

TENDERS are invited for the CONSTRUCTION of ROADS AND SEWERS on the ABOVE SITE. The Work to consist of approx. 1,600 super. yd. of Reinforced Concrete Carriageway and the Adjoining Footpaths, together with the Laying of Sewers, Construction of Culverts, etc.

Tender documents may be obtained upon application to MR. H. WILMAN, A.M.I.C.E., Borough Engineer and Surveyor, Whalley Range, Lansdowne Road, Colwyn Bay.

Tenders, in plain sealed envelopes endorsed "Roads and Sewers, Mochdre," should be delivered to the undersigned not later than 12 Noon on MONDAY, 4th July, 1960.

HAROLD E. BRAITHWAITE,

Town Clerk.

Town Hall,

Colwyn Bay,

13th June, 1960.

## BOROUGH OF HYTHE.

RESURFACING OF TRUNK, COUNTY AND DISTRICT ROADS.

TENDERS are invited for the RESURFACING of CERTAIN ROADS in COLD ASPHALT, 1½in. consolidated thickness (approx. 30,900 sq. yd.), and in COLD ASPHALT, ¾in. consolidated thickness (approx. 800 sq. yd.).

Form of Tender, Specification and Contract documents may be obtained from the Borough Surveyor at the undermentioned address on payment of a deposit of £5 5s., which will be refunded on receipt of a bona-fide Tender which is not subsequently withdrawn. Cheques should be made payable to "Hythe Corporation."

Tenders and all documents in plain sealed envelopes endorsed "Resurfacing of Roads" must be delivered to the undersigned not later than Noon on the 11th July, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

J. NOWELL,

Town Clerk.

Municipal Offices,

Hythe,

Kent,

June, 1960.

## BOROUGH OF BATLEY.

PRIVATE STREET IMPROVEMENTS.

TENDERS are invited for the CONSTRUCTION of OAKS ROAD (part of) (approx. 215 lin. yd.), FORT ANN ROAD (approx. 180 lin. yd.), and MUSGRAVE STREET (approx. 235 lin. yd.), all in accordance with the Plans, Specifications and Bills of Quantities prepared by the Borough Engineer.

The Work includes Excavating, Sewering, Levelling, Paving, Tarmac and Fine Cold Asphalt Surfacing, Flagging, Kerbing, etc., and making good the above streets.

Copies of the Specifications and Bills of Quantities may be obtained on application from the Borough Engineer, Hanover Street, Batley.

Tenders, in a plain sealed envelope (not bearing any name or mark indicating the sender) endorsed "Private Street Improvements," must be delivered to the undersigned by First Post on MONDAY, 11th July, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

L. O. BOTTOMLEY,

Town Clerk.

## CITY OF BATH.

CONSTRUCTION OF FOOTPATHS, ACCESS ROADS AND ANCILLARY WORKS.

TWERTON-WHITEWAY ESTATE.

CONTRACT NO. 2.

TENDERS are invited for the ABOVE WORKS.

The Forms of Tender, Specification, Bill of Quantities and Plans may be obtained from the City and Water-Engineer, Guildhall, Bath, and the Council's Standing Orders may be examined at his office upon payment of Two Guineas. This deposit will be returned to those who submit a bona-fide Tender which is not subsequently withdrawn.

Tenders must be delivered in the envelope provided not later than Noon on 7th JULY, 1960, to the Town Clerk, Guildhall, Bath.

The Corporation do not bind themselves to accept the lowest or any Tender.

JARED E. DIXON,

Town Clerk.

Guildhall,

Bath,

10th June, 1960.

## STANDISH-WITH-LANGTREE URBAN DISTRICT COUNCIL.

SURFACE DRESSING WORK.

FIRM-PRICE TENDERS are invited for the SURFACE DRESSING of approx. 16,500 sq. yd. of ROAD within the Urban District, including COLD BITUMINOUS EMULSION and GRANITE CHIPPINGS.

The Specification and Form of Tender can be obtained from MR. H. KNOWLES, A.M.I.Mun.E., A.M.Inst.H.E., Surveyor and Water Engineer, Ashfield House, Standish.

Tenders must be returned in a plain sealed envelope endorsed "Tender—Surface Dressing," so as to reach the undersigned not later than 23rd JULY, 1960.

D. CHISHOLM,

Clerk of the Council.

Council Offices,

Ashfield House,

Standish,

17th June, 1960.

## CONTRACTS

## COUNTY BOROUGH OF WALSALL.

PUBLIC WORKS DEPARTMENT.

DARLSTON ROAD HOUSING SITE—ROADS AND SEWERS.

TENDERS are invited for the CONSTRUCTION of approx. 6,200 sq. yd. of CARRIAGEWAY, having Precast Concrete Kerbs, Lean-mix Concrete Base and Bituminous Macadam Base Coat Surfacing, Storm and Foul Water Sewerage, with Precast Concrete Manholes. The gross site area is approx. six acres.

Forms of Tender and appropriate documents can be obtained from the undersigned on the deposit of £2 2s., returnable on receipt of a bona-fide Tender.

Tenders must be sent in a sealed envelope addressed to the Town Clerk, Council House, Walsall, bearing the words "Darlaston Road Housing Site," and are to be received not later than 12 Noon, MONDAY, 4th July, 1960.

Any Tender received after the time stated or otherwise than in an envelope endorsed as required may be rejected.

An envelope suitably addressed and endorsed will be supplied with the Form of Tender, and it is desired that this envelope be used.

The Council do not bind themselves to accept the lowest or any Tender.

M. E. HABERSHON,

Borough Engineer and Surveyor.

Council House,

Walsall,

11th June, 1960.

## LANGEFNI URBAN DISTRICT COUNCIL.

CONTRACT REF. 31G2.

SEWERS.

FIXED-PRICE TENDERS are invited for the CONSTRUCTION of approx. 4,000 yd. of 6in. dia. SEWERS, together with Manholes and incidental Works, and the Construction of approx. 430 yd. of 4in. dia. Drains, together with Inspection Chambers and incidental Works.

Copies of the General Conditions of Contract, Form of Tender, Specification and Bill of Quantities may be obtained from the Council's Consulting Engineers, MESSRS. SANDFORD FAWCETT AND PARTNERS, 53 Victoria Street, Westminster, London, S.W.1, on payment of a deposit of Five Guineas, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn and the return of all documents.

Drawings may be examined at the office of the Surveyor to the Llangefni Urban District Council, High Street, Llangefni, Anglesey, and at the offices of the Council's Consulting Engineers.

Tenders, in plain sealed covers endorsed "Tender for Sewers," should reach the undersigned not later than 12 Noon, MONDAY, the 4th July, 1960.

The Council do not bind itself to accept the lowest or any Tender.

ARTHUR J. EVANS,

Clerk of the Council.

Council Offices,

12-14 High Street,

Llangefni,

Anglesey.

## NORTHWICH URBAN DISTRICT COUNCIL.

PRELIMINARY ROADWORKS AND DRAINAGE WORKS, MALPAS ROAD, NORTHWICH.

TENDERS are invited for the CONSTRUCTION of ROADS AND DRAINAGE WORKS on MALPAS ROAD, Northwich, including approx. 450 cu. yd. of Excavation, 1,400 sq. yd. of Ashes, Hardcore, Macadam and Surface Dressing, 450 lin. vd. of 5in. x 10in. Kerbs, 400 lin. vd. of 6in. dia. S.G.W. Pipes, together with all necessary ancillary Works.

Conditions of Contract, Specification of Workmanship, and Materials, Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, The Council House, Northwich, during normal office hours.

Tenders, in plain sealed envelopes endorsed "Roadworks, Northwich—Contract 457," but bearing no mark or indication of the sender's name, should be delivered to the undersigned not later than Noon on 9th JULY, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

D. HOCKING,

Clerk of the Council.

The Council House,

Northwich.

## WEST KESTEVEN RURAL DISTRICT COUNCIL.

WATER SUPPLY.

BOOSTER STATION—WILSFORD HEATH.

TENDERS are invited from responsible contractors for the CONSTRUCTION of a SMALL PUMPING STATION (15ft. x 11ft.) at WILSFORD HEATH, and Connections to Existing C.I. Water Mains.

Plans, Specification and Bill of Quantities may be seen at the offices of the Council's Consulting Engineers, MESSRS. ELLIOTT AND BROWN, Stanley House, Pelham Road, Nottingham, and copies of the Quantities and Form of Tender may be obtained from them on deposit of Five Guineas (by cheque payable to the West Kesteven R.D.C.), which will be refunded on receipt of a bona-fide Tender not afterwards withdrawn and return of the Bills of Quantities and other documents loaned to contractor within seven days of notice informing him that a Tender has been accepted.

Tenders, in plain sealed envelopes endorsed "Booster Station—Wilsford Heath," should be delivered to me at Sandon Close, Grantham, not later than the First Post on 9th JULY. The lowest or any Tender will not necessarily be accepted.

Acceptance of Tender will be subject to the final approval of the Ministry of Housing and Local Government. Work must be commenced immediately such approval is received.

J. R. MORGAN,

Clerk of the Council.

## EAST-LOTHIAN WATER BOARD.

TENDERS are invited for the LAYING and JOINTING of PIPELINE, 6in. and 4in. dia., for distances of 3,730 and 2,485 lin. yd., respectively.

Drawings may be seen, and the Specification and Form of Tender obtained, on application to G. H. HILL AND SONS (Manchester), Civil Engineers, 51 Mosley Street, Manchester, with a deposit of £5 5s., returnable on receipt of a bona-fide Tender. Copies of the Drawings available on payment of £1 1s., which will not be returned.

Documents and Drawings may also be inspected at the offices of the Board in Haddington by previous appointment.

Sealed Tenders, endorsed "Tender for Dirleton Contract," to be delivered to the Clerk to the Board, County Buildings, Haddington, not later than 15th JULY, 1960.

The Board do not bind themselves to accept the lowest or any Tender.

THOS. GIBB,

Clerk to the Board.

8th June, 1960.

## CONTRACTS

## COUNTY BOROUGH OF WALSALL.

## PUBLIC WORKS DEPARTMENT.

STONE LANE IMPROVEMENT  
AND RECONSTRUCTION OF TEECE'S BRIDGE.

TENDERS are invited for the CONSTRUCTION of approx. 5,000 sq. yd. of CARRIAGEWAY, having Bin. Lean-mix Base and Bituminous Surfacing; Demolition of Existing Canal Bridge and Reconstruction with Reinforced Concrete Abutments and Precast Prestressed Beams (35ft. 6in. span).

Forms of Tender and appropriate documents can be obtained from the undersigned on the deposit of £5 5s., returnable on receipt of a bona-fide Tender. Tenders must be sent in a sealed envelope addressed to the Town Clerk, Council House, Walsall, bearing the words "Stone Lane Improvement," and are to be received not later than 12 Noon, TUESDAY, 5th July, 1960.

Any Tender received after the time stated or otherwise than in an envelope endorsed as required may be rejected.

An envelope suitably addressed and endorsed will be supplied with the Form of Tender, and it is desired that this envelope be used.

The Council do not bind themselves to accept the lowest or any Tender.

M. E. HABERSON.

Borough Engineer and Surveyor.

Council House,

Walsall,  
13th June, 1960.

## BOROUGH OF SALE.

ADVANCED PREPARATION OF HOUSING SITES—  
GRATRIX LANE NO. 3/1960 DEVELOPMENT.

TENDERS are invited for the CONSTRUCTION of 300 lin. yd. of ROADWORKS and 12in. to 9in. dia. SEWERS.

Specification, Bills of Quantities and Form of Tender obtainable on deposit of £2 2s. from the Borough Engineer's Office, Town Hall, Sale, where the Plan and General Conditions of Contract may be inspected.

No Tender will be accepted except in the plain sealed envelope provided endorsed "Tender—Gratrix Lane No. 3/1960 Development" but devoid of any name or mark indicating the sender, so as to reach the undersigned not later than 10 a.m. on MONDAY, 11th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

BERTRAM FINCH,

Town Clerk.

Town Hall,

Sale,  
10th June, 1960.

## CITY OF CARDIFF.

## WATERHALL ROAD IMPROVEMENT SCHEME.

FIXED-PRICE TENDERS are invited for WATERHALL ROAD IMPROVEMENT SCHEME, comprising approx. 8,000 sq. yd. of New and Improvement Carriageway, a New Sewer, approx. 400 yd. of S.W. Sewer and ancillary works.

Conditions of Tender, Specification, Bills of Quantities and Drawings may be obtained from the City Surveyor (at whose office further Drawings and Conditions of Contract may be inspected), and to whom application should be made, accompanied by a deposit of the sum of £2 2s. Cheques should be made payable to the Cardiff Corporation and crossed "Not Negotiable and Co."

The deposit will be refunded on receipt of a bona-fide Tender or the return of the Contract documents by the closing date.

Tenders will not be considered unless enclosed in a plain sealed envelope endorsed "Tender for Waterhall Road Improvement Scheme" addressed to the undersigned at the City Hall, Cardiff, and sent by Registered Post so as to be received not later than FRIDAY, the 8th July, 1960.

The envelope must not bear the name of, or any mark indicating the identity of, the tenderer.

The Council does not bind itself to accept the lowest or any Tender.

S. TAPPER-JONES,

Town Clerk.

City Hall,

Cardiff,  
9th June, 1960.

## THE CHIGWELL URBAN DISTRICT COUNCIL.

CHILDREN'S PLAYGROUND—SITE "C"—  
WESTALL ROAD.

Chigwell Urban District Council invites TENDERS for WORKS comprising approx. 750 sq. yd. of MACADAM AND CONCRETE PAVING, 35 lin. yd. 4in. dia. STONEWARE DRAINS, ERECTION OF PLAYGROUND EQUIPMENT and incidental works.

Tender Form, Bills of Quantities and Specification, on deposit of £2 2s. (returnable after submission of bona-fide Tender not afterwards withdrawn and return of documents issued), may be obtained from the Engineer and Surveyor at the address below, where Drawings and Conditions of Contract may be inspected. Contract will provide for fair wages clause and Bond. Tenders, sealed in plain envelope provided, bearing no mark indicating sender, to CLERK OF THE COUNCIL, Council Offices, Loughton, Essex, by 4th July.

The Council does not bind itself to accept the lowest or any Tender.

## BRIDGE - BLEAN RURAL DISTRICT COUNCIL.

## ERECTION OF FIVE DWELLINGS AT WALTHAM.

TENDERS are invited for the ERECTION OF ONE BLOCK of TWO TWO-BEDROOM HOUSES, ONE THREE-BEDROOM HOUSE and TWO TWO-BEDROOM FLATS at WALTHAM, together with the Provision of External Services within and without the Curtilage of the Dwellings.

Copies of the Bills of Quantities and Form of Tender may be obtained from the Council Offices, 41 Old Dover Road, Canterbury, on deposit of a fee of Two Guineas (cheques, postal orders, etc., to be made payable to the Bridge-Blean Rural District Council). The deposit will be refunded only upon receipt of a bona-fide Tender not subsequently withdrawn and the documents (Bills of Quantities) lent for the purpose of tendering.

Prints of the Drawings may be inspected either at the office of the Architect, H. V. GODFREY, ESQ., A.R.I.B.A., 63 Oxford Street, Whitstable, or at the Council Offices during normal office hours.

Tenders, in sealed envelopes endorsed "Houses—Waltham," accompanied by the Bills of Quantities and the General Summary, must reach the undersigned not later than 12 Noon on TUESDAY, the 12th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

I. F. SOILLEUX,

Clerk of the Council.

Council Offices,  
41 Old Dover Road,  
Canterbury,  
16th June, 1960.

## CONTRACTS

## COUNTY BOROUGH OF WALSALL.

## PUBLIC WORKS DEPARTMENT.

## WALLOW LANE BRIDGE.

FIXED-PRICE TENDERS are invited for the CONSTRUCTION of the NEW BRIDGE of two spans, 55ft. and 39ft., and Approaches; also the Demolition of the Existing Steel Superstructure. The existing brick abutments and wing walls will remain.

The construction consists of R.C. retaining walls and staircase to the approaches, and R.C. abutments and wing walls to the bridge, which has a post-tensioned precast prestressed concrete deck; together with drainage, earth embankments and road surfacing. Forms of Tender and appropriate documents can be obtained from the undersigned on the deposit of £2 2s., returnable on receipt of a bona-fide Tender. Tenders must be sent in a sealed envelope addressed to the Town Clerk, Council House, Walsall, bearing the words "Wallow Lane Bridge," and are to be received not later than 12 Noon on TUESDAY, 5th July, 1960.

Any Tender received after the time stated or otherwise than in an envelope endorsed as required may be rejected. An envelope suitably addressed and endorsed will be supplied with the Form of Tender, and it is desired that this envelope be used.

The Council do not bind themselves to accept the lowest or any Tender.

M. E. HABERSON,

Borough Engineer and Surveyor.

Council House,

Walsall,  
13th June, 1960.

## COUNTY BOROUGH OF BRIGHTON.

## HIGHWAYS ACT, 1959—CODE OF 1892.

TENDERS are invited for COMPLETING THE FOLLOWING STREET WORKS at:

Lustreils Vale (Part), Saltdan—length 385 yd.  
Wayland Avenue (Part), Westdene—length 300 yd.  
The works consist of Kerb, Macadam Carriageway, Surface Drainage, Flag Pavements, and incidental works.  
Fairview Rise, Westdene—length 187 yd. Kerb, Flag Pavements, and incidental works.

The Bill of Quantities and Contract documents can be obtained and the General Conditions of Contract and Drawings inspected at the Office of D. J. HOWE, M.I.C.E., Borough Surveyor, 26-30 King's Road, Brighton.

Tenders, with priced Bill of Quantities and other documents, must be returned in the envelope provided, bearing no indication of the sender's identity, not later than Noon on SATURDAY, 2nd July, 1960.

The Council is not bound to accept the lowest or any Tender.

W. O. DODD,

Town Clerk.

Town Hall,

Brighton, 1,  
June, 1960.

## BOROUGH OF ELLESMERE PORT.

## CONTRACT NO. 296.

EXTENSION OF FEMALE CHANGING BLOCK AND PROVISION OF LIVING ACCOMMODATION OVER.

TENDERS are invited for the EXTENSION OF THE EXISTING FEMALE CHANGING BLOCK, with LIVING ACCOMMODATION OVER, at the RIVACRE VALLEY SWIMMING POOL.

Contract documents obtainable from the Borough Engineer and Surveyor, Queen Street, Ellesmere Port. Sealed Tenders, in the plain official envelope provided, must reach the undersigned by Post by not later than 2 p.m. on MONDAY, the 11th July, 1960. The Council do not bind themselves to accept the lowest or any Tender.

R. J. BERNIE,

Town Clerk.

Municipal Offices,  
Ellesmere Port,  
Cheshire.

## DORKING RURAL DISTRICT COUNCIL.

## GOODWYNS ESTATE—ROADS AND SEWERS.

## CONTRACT VII.

TENDERS are invited for SURFACING of 2,000 sq. yd. CARRIAGEWAYS and CONSTRUCTION of 1,200 sq. yd. of FOOTWAYS.

Form of Tender and Contract documents may be obtained from the Engineer and Surveyor. Tenders are to be delivered to the undersigned by Noon on TUESDAY, 12th July, 1960.

F. G. SUTHERLAND,

Clerk of the Council.

Council Offices,  
Pipbrook,  
Dorking,  
Surrey.

## PRESTON RURAL DISTRICT COUNCIL.

## BARTON, BROUGHTON AND GOOSNARGH AND BILSBOROUGH JOINT SEWERAGE AND SEWAGE DISPOSAL SCHEME.

TENDERS are invited, on a FIXED-PRICE BASIS, from experienced public works contractors for the CONSTRUCTION of approx. 11 MILES of SEWERS, from 6in. to 15in. in dia., including Manholes and House Drain Connections, together with Two Small Pumping Stations and Rising Mains and a Sewage Disposal Works.

The Work is to be carried out in the Parishes of Barton, Broughton and Goosnargh, in the Preston Rural District, and the Parishes of Bilsborough and Myerscough, in the Garstang Rural District. Application for the Specification and Bills of Quantities should be made to the Council's Consulting Engineers, MESSRS. WARD, ASHCROFT AND PARKMAN, 38 The Temple, Dale Street, Liverpool, 2, together with a deposit cheque for £5 5s., made payable to the Preston Rural District Council, which will be returnable on receipt of a completely priced bona-fide Tender not subsequently withdrawn.

Drawings may be inspected during the usual office hours at the offices of the Consulting Engineers, from whom Drawings may also be had on loan at a non-returnable charge of £5 s. made payable to Messrs. Ward, Ashcroft and Parkman.

Tenders, in plain sealed envelopes clearly marked "Barton, Broughton and Goosnargh and Bilsborough Joint Sewerage," must be delivered to the undersigned not later than Noon on THURSDAY, 14th July, 1960, and should be accompanied by the names and addresses of three engineers for whom similar work has been carried out.

The Councils do not bind themselves to accept the lowest or any Tender, and will not defray any expenses incurred by those tendering.

F. B. YOUNG,

Clerk of the Preston R.D.C.

Council Offices,  
Guildhall Street,  
Preston, Lancs.

18th June, 1960.

## CONTRACTS

## URBAN DISTRICT COUNCIL OF CHORLEYWOOD.

## SITE CLEARANCE, ROADS AND SEWERS.

TENDERS are invited, on a Fixed-price Basis, for the CARRYING-OUT OF SITE PREPARATION WORK on 25 acres of Land east of BERRY LANE, Chorleywood, Hertfordshire, comprising the following:

Clearance of Trees and Hedgerow.  
Approx. 5,600 cu. yd. Excavation.  
Approx. 1,300 lin. yd. 6in. dia. Soil Sewers.  
Approx. 1,100 cu. yd. Hardcore Foundations.  
Approx. 1,700 lin. yd. Channels and Kerbing, together with Drainage and Soakaways to same.

Approx. 5,600 sq. yd. Temporary Surfacing. The Plans, Sections and Conditions of Contract may be inspected at the Office of the Council's Architect, MR. L. C. POWELL, F.R.I.B.A., Norfolk House, Station Road, Chesham, Bucks.; also the Council's Offices at the address below. Bills of Quantities and Forms of Tender may be obtained from the Architect at the above address, upon payment of Two Guineas deposit, which will be returned upon the receipt of a bona-fide Tender and the priced Bill of Quantities. Cheques should be made payable to Chorleywood Urban District Council and crossed. Applications should reach my Office not later than 30th JUNE, 1960.

Tenders must be on the forms supplied by the Council's Architect, accompanied by the Specification and priced Bills of Quantities, and must be delivered to me at the Offices of the Council at the under-mentioned address, and endorsed "Tender for Site Clearance, Roads and Sewers," not later than 12 Noon on SATURDAY, 30th July, 1960.

The successful contractor will be required to provide a Bond for the purpose of the Contract.

The Council do not bind themselves to accept the lowest or any Tender.

R. DARRAH,

Clerk of the Council.

Council Offices,  
Chorleywood House,  
Chorleywood, Herts.

17th June, 1960.

## STAINES URBAN DISTRICT COUNCIL.

## IMPROVEMENT TO JUNCTION OF LONDON ROAD AND DESFORD WAY, ASHFORD.

TENDERS are invited for the WIDENING and PROVISION OF TWO CENTRAL REFUGES at the junction of London Road and Desford Way. The works comprise the following approx. quantities: 250 cu. yd. of Excavation and Cart; 400 sq. yd. of 9in. Concrete Haunch; 2,300 sq. yd. of 2in. Granite filled Asphalt; 250 lin. yd. of Take-up and Re-lay Kerb; 440 sq. yd. of 2 1/2 in. Tarred Gravel Macadam; and Provide and Fix Two Central Refuges.

Specification, Bill of Quantities and Form of Tender may be obtained from, and Plans inspected at, the Office of the Engineer and Surveyor, 240 London Road, Staines, upon payment of a deposit of £2 2s., which will be returned upon receipt of a sealed bona-fide Tender, not subsequently withdrawn, together with the Specification.

Sealed Tenders, in the envelope provided, endorsed "Improvement to Junction of London Road and Desford Way," and free from any name or mark indicating the sender, shall be received by the undersigned not later than 5 p.m. on the 7th JULY, 1960. The Council does not bind itself to accept the lowest or any Tender.

F. ENTWISTLE,

Clerk of the Council.

Elmsleigh,  
73 High Street,  
Staines, Middlesex.

## STEVENAGE URBAN DISTRICT COUNCIL.

## PROPOSED SWIMMING POOL AT ST. GEORGE'S WAY, STEVENAGE.

The Council will shortly be inviting TENDERS for the ERECTION of a COVERED SWIMMING POOL constructed in accordance with A.S.A. Standards and including a Smaller Training Pool at St. George's Way, Stevenage, near to the Town Centre.

It is the intention of the Council to invite Firm-price Tenders on a selected basis, and contractors who wish to be considered should forward their names and addresses to the undersigned before 11th JULY, 1960. Contractors will be selected and the Council may order other work.

Tender documents will be issued during September, 1960, and work is likely to commence during October or November, 1960.

E. J. BOWERS,

Clerk of the Council.

Council Offices,  
Orchard Road,  
Stevenage.

14th June, 1960.

## BEVERLEY RURAL DISTRICT COUNCIL.

## ELLOUGHTON AND BRANTINGHAM SEWERAGE SCHEME.

TENDERS are invited for the FOLLOWING: CONTRACT NO. 1.—The Construction of approx. 2,600 yd. of Concrete Tube and Spun-iron Sewers, varying from 6in. to 27in. in dia.; approx. 180 yd. of 18in. dia. Spun-iron Rising Main; a short 27in. dia. Spun-iron River Outfall carried on Timber Piles; and a Medium-sized Sewage Pumping Station housing three 10in. dia. Pumps and two Commutators. The whole of the works listed above are situated in the Parishes of Elloughton and Brantingham in the Beverley Rural District.

CONTRACT NO. 2.—The Supply and Erection of three 300 cu. ft. per minute Unscreened Sewage Pumps, complete with Electric Motors, Starters and Accessories.

Contractors wishing to tender should apply for the documents and Drawings to the Council's Consulting Engineers, JOHN H. HAISTE AND PARTNERS, Belmont House, 20 Wood Lane, Headingly, Leeds, 6, enclosing a deposit cheque for Three Guineas in respect of each Contract, payable to the Beverley Rural District Council, such deposit to be refunded upon receipt of a bona-fide Tender and the return of all documents and Drawings.

Drawings, showing the location and extent of the works, may be seen at the Offices of the Consulting Engineers, or of the Council's Engineer and Surveyor, MR. G. PALFREYMAN, 22 Laigate, Beverley, during the usual office hours.

Tenders are to be submitted to the undersigned not later than 12 Noon on THURSDAY, the 14th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender they may receive.

G. H. LEWIS,

Clerk of the Council.

The Gables,  
65 Laigate,  
Beverley.

## CONTRACTS

## BOROUGH OF HOVE.

TENDERS are invited for the CONSTRUCTION of approx. 650 lin. ft. of ROAD OF HANGLETON WAY, to be known as CHICHESTER CLOSE, consisting of Excavation, Carriageway Foundation of Clinker, Hardcore and Flints, Gullies to Soakaways and Precast Concrete Channelling.

Further particulars may be obtained, and Plans and Specifications seen at, the office of the Borough Engineer and Surveyor, Town Hall, Hove.

Fixed-price Tenders, on forms supplied, must be delivered not later than Noon on SATURDAY, the 2nd July, 1960, in sealed envelopes addressed to the undersigned and endorsed "Tender for Chichester Close".

The lowest or any Tender will not necessarily be accepted.

JOHN E. STEVENS, Town Clerk.

Town Hall,  
Hove, 3,  
15th June, 1960.

## BOROUGH OF WILLESDEN.

RESURFACING OF CAMBRIDGE ROAD (PART),  
N.W.6.

TENDERS are invited for the TAKING-UP and REMOVAL of approx. 1,300 sq. yd. of WOOD BLOCKS and the PROVISION and LAYING OF HOT ROLLED ASPHALT in place thereof, together with incidental works, in Cambridge Road, N.W.6.

Tender documents may be obtained from the Borough Engineer and Surveyor, Town Hall, Dyne Road, Kilburn, N.W.6, upon application in writing, accompanied by a deposit of Two Guineas, which deposit will be returned upon the receipt of a bona-fide Tender not subsequently withdrawn.

The sealed Tender must be submitted in the envelope provided, which must not bear any name or mark of the sender, and must reach the undersigned not later than 10 a.m. on WEDNESDAY, 20th July, 1960.

The Council does not bind itself to accept the lowest or any Tender.

R. S. FORSTER, Town Clerk.

Town Hall,  
Dyne Road,  
Kilburn, N.W.6.

## BOROUGH OF OLDBURY.

BRITISH LEGION HEADQUARTERS.

TENDERS are invited, on a Fixed-price Basis, for the ERECTION of the new BRITISH LEGION HEADQUARTERS, WINDSOR ROAD, Oldbury.

Applications from contractors wishing to tender should reach the Borough Engineer and Surveyor at Municipal Bank Chambers, Birmingham Street, Oldbury, not later than the 27th of JUNE, 1960, accompanied by a deposit of £2 2s., which will be refunded on receipt of a bona-fide Tender which is not withdrawn, or upon return of all documents not later than the closing date for the receipt of Tenders.

Bills of Quantities and Forms of Tender will be issued on the 27th of June, 1960, and sealed Tenders, in the envelopes provided, and bearing no mark indicating the sender, must be delivered to the undersigned not later than 12 Noon on FRIDAY, the 15th July, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

KENNETH PEARCE, Town Clerk.

Municipal Buildings,  
Oldbury,  
June, 1960.

## COSELEY URBAN DISTRICT COUNCIL.

ERECTION OF STREET LIGHTING.

TENDERS are invited for the ERECTION OF STREET LIGHTING POINTS ON CONCRETE COLUMNS in various streets in the district during the financial year.

The Contract includes the Erection of 195 Group B points in the first instance, with the probability of a further 39 Group B and 2 Group A points in stages. Tender documents, returnable by 11th JULY, 1960, may be obtained from the undersigned on receipt of a deposit of £2.

J. C. ROPER, Clerk of the Council.

Council House,  
Coseley.

## NEW MILLS URBAN DISTRICT COUNCIL.

EXTENSION OF BAKEHURST ESTATE.

FIXED-PRICE TENDERS are invited for the CONSTRUCTION of approx. 2,500 lin. yd. of ROAD WORKS: 300 lin. yd. of 9in. and 6in. dia. SURFACE WATER SEWERS; 380 lin. yd. of 3in. dia. WATER MAIN, and the ERECTION of 11 STREET LIGHTING COLUMNS, together with incidental works.

A copy of the Plan and Conditions of Contract may be seen at the Office of the Council's Surveyor, from whom Form of Tender, Specification and Bill of Quantities can be obtained.

Tenders, in envelope provided, to reach me by 9 a.m., 11th JULY, 1960.

J. BAILEY, Clerk of the Council.

Town Hall,  
New Mills,  
Near Stockport.

## COSELEY URBAN DISTRICT COUNCIL.

MASON STREET-CHAD ROAD IMPROVEMENT.

TENDERS are invited for the ABOVE WORKS, comprising the Reconstruction and Widening, to an average overall width of approx. 40ft., with a 24ft. wide Cold Asphalt-surfaced Carriageway, of 400 lin. yd. of Existing Tarmacadam Road.

Tender documents, returnable by 11th JULY, 1960, may be obtained from the undersigned on receipt of a deposit of £2.

J. C. ROPER, Clerk of the Council.

Council House,  
Coseley,  
Staffs.

## CRAWLEY DEVELOPMENT CORPORATION.

APPLICATIONS are invited from contractors wishing to be considered for tendering upon Bills of Quantities for the ERECTION OF DWELLINGS (including Two-storey Flats) and LOCK-UP GARAGES on various Infill Sites in the New Town. The smallest site is likely to have six houses and the largest 34 houses and flats, each site having a block of lock-up garages.

Contractors are requested to indicate both the smallest and largest number of dwellings for which they would be prepared to Tender.

Applications to CHIEF ARCHITECT, Broadfield, Crawley, Sussex, by 2nd JULY, 1960.

## CONTRACTS

## OXFORDSHIRE COUNTY COUNCIL.

TENDERS are invited for the SUPPLY and DELIVERY of 10,200 lin. yd. of 4ft. high CLEFT CHESTNUT PALE FENCING manufactured in accordance with B.S. 1722: Part 4, 1951.

Further particulars may be obtained from the County Surveyor, 8 New Road, Oxford, to whom Tenders should be returned not later than 4th JULY, 1960.

GERALD GALE BURKITT, Clerk of the Council.

County Hall,  
Oxford,  
June, 1960.

## COUNTY OF LINCOLN - PARTS OF KESTIVEN.

TRUNK ROAD, A.1—GRANTHAM BY-PASS.

TENDERS are invited for the SUPPLY and ERECTION of 15 STEEL LIGHTING COLUMNS on the ROUNDABOUT on GONERBY MOOR. Specification and Bill of Quantities may be obtained from the County Surveyor, County Offices, Sleaford. Tenders should be received by me not later than 15th JULY, 1960.

J. E. BLOW, Clerk of the County Council.

County Offices,  
Sleaford,  
14th June, 1960.

## METROPOLITAN WATER SEWERAGE AND DRAINAGE BOARD.

NEW SOUTH WALES.

WATER SUPPLY.

CONTRACT NO. 3416-W.

TENDERS are invited for the DESIGN, MANUFACTURE, SUPPLY, DELIVERY and INITIAL MAINTENANCE of FIVE (5) AUTOMATIC STOP VALVES of 15in. nominal bore or nearest standard size.

Remote controlled operation of four (4) of these valves is required, and the associated electrical equipment is to be included in the Contract.

Tender documents, including the Specification and Schedules, can be obtained on application to the Agent-General for New South Wales, 56-57 Strand, London, W.C.2.

Tenders must be delivered to the Metropolitan Water Sewerage and Drainage Board, 341 Pitt Street, Sydney, New South Wales, Australia, by 2 p.m. on TUESDAY, 23rd August, 1960.

## BOROUGH OF FLINT.

ERECTION OF 87 URBAN TRADITIONAL DWELLINGS, PEN GOCH, FLINT.

FIXED-PRICE TENDERS are invited for the ERECTION of the ABOVE HOUSES, together with all necessary Site Works in connection therewith.

Copies of the Specification and Bills of Quantities may be obtained from, and the Drawings and Conditions of Contract inspected at, the office of the Borough Engineer and Surveyor, Municipal Offices, Earl Street, Flint, on payment of refundable deposit of £3 3s.

Tenders for the Works, on the prescribed form, must be delivered to the undersigned not later than 2.30 p.m. on MONDAY, 11th July, 1960, in a plain sealed envelope endorsed "Tender for 87 Houses, Pen Goch, Flint".

The Council does not bind themselves to accept the lowest or any Tender.

WILLIAM MCINTYRE, Town Clerk.

Town Hall,  
Flint,  
14th June, 1960.

## CITY OF LEICESTER.

RE-ERECTION OF DRESSING CUBICLES, AYLESTONE BATHS, KNIGHTON FIELDS ROAD WEST, LEICESTER.

TENDERS are invited from specialist firms for the REMOVAL of 38 EXISTING DRESSING CUBICLES and the PROVISION and ERECTION of 38 NEW CUBICLES. The cubicles are to be constructed of materials which are resistant to corrosion, and within reasonable limits of damage by cutting.

Full details and Forms of Tender are obtainable from the undersigned on receipt of £1 1s., which will be refunded upon submission of a bona-fide Tender.

Tenders to be returned in the formal envelope by 4.30 p.m. on THURSDAY, 4th August, 1960.

JOHN L. BECKETT, M.I.C.E., City Surveyor.

Town Hall,  
Leicester.

## CITY OF LEICESTER.

EDUCATION COMMITTEE.

EXTENSIONS TO COLLEGE OF ART AND TECHNOLOGY—PHASE I.

Contractors with first-class organisational ability and experience in the handling of large contracts where time is an important factor, who wish to TENDER FOR PHASE I of MAJOR EXTENSIONS to the COLLEGE OF ART AND TECHNOLOGY, Leicester (approx. 63,000 sq. ft., mainly in C.L.A.S.P. Construction), are invited to inspect Drawings etc., at my office, and to submit their names not later than 30th JUNE, 1960, together with particulars of similar sized contracts previously undertaken.

Bills of Quantities will be available by 14th July, 1960, and Tenders will be due on 16th August, 1960.

J. H. LLOYD OWEN, City Architect.

10 Loseby Lane,  
Leicester.

## FRIERN BARNET URBAN DISTRICT COUNCIL.

COLNEY HATCH LANE RESURFACING.

OAKLEIGH ROAD NORTH WIDENING.

ACCESS ROAD, BALFOUR GROVE HOUSING SITE.

TENDERS are invited for the ABOVE THREE SCHEMES, involving altogether approx. 3,000 sq. yd. of New Road Construction and 13,000 sq. yd. of Resurfacing Works, together with Footpaths, Drains, Sewers and ancillary Works. Specification, Bills of Quantities and Form of Tender may be obtained from the Engineer and Surveyor, Town Hall, N.11.

Tenders, in the envelope provided, bearing no indication of the sender, are to be delivered to the undersigned not later than 10 a.m. on FRIDAY, 8th July, 1960.

R. S. CLOTHIER, Clerk of the Council.

Town Hall,  
N.11.

## CONTRACTS

## WILTSHIRE COUNTY COUNCIL.

TENDERS invited for the REALIGNMENT and WIDENING of FIVE SEPARATE CURVES on the ROAD leading from Bulford Military Camp to the Tidworth Military Camp.

The work comprises the Excavation for, and Construction of, New Carriageway approx. 1,700 lin. yd. together with Kerbing, Surface Water Drainage, and Fencing in parts.

Relevant documents obtainable from County Surveyor, County Hall, Trowbridge, on payment of £2 deposit, returnable on receipt of a bona-fide Tender. Drawings may be inspected, by appointment, at the above address.

Tenders, in envelopes provided, bearing no name or mark indicating origin, returnable by 5 p.m. on 25th JULY, 1960.

P. A. SELBORNE STRINGER, Clerk of the County Council.

## BOROUGH OF WORTHING.

PRIVATE STREET WORKS.

The CORPORATION invites TENDERS for the FOLLOWING:

WISTON AVENUE.—The Provision and Laying of 63 lin. yd. of 6in. dia. Glazed Ware Pipes; the Construction of 2,150 sq. yd. of Carriageway with Flint Foundation and 2in. Coarse Cold Asphalt; also 500 lin. yd. of Precast Concrete Channel Blocks.

The Form of Tender, Specification, and Bill of Quantities may be obtained on application to the Borough Engineer and Surveyor, Town Hall, Worthing, on payment of a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender or return of the Contract documents.

General Conditions of Contract and Drawings may be inspected at the Office of the Borough Engineer, Tenders, in the envelopes provided, and endorsed "Wiston Avenue," must be received on or before 13th JULY, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

ERNEST G. TOWNSEND, Town Clerk.

Town Hall,  
Worthing,  
10th June, 1960.

## WEDNESFIELD URBAN DISTRICT COUNCIL.

BALMAIN CRESCENT—PRIVATE STREET WORKS.

FIXED-PRICE TENDERS are invited for the MAKING-UP of BALMAIN CRESCENT, under the provisions of the Highways Act, 1959, Part IX, Code of 1992.

The work comprises approx. 230 lin. yd. of Precast Concrete Kerbing; 700 sq. yd. of Tarmacadam Carriageways; 490 sq. yd. of Bitumen Macadam Footways; and Footway Crossings, and other incidental works.

Tender documents may be obtained from THOS. A. PEACOCK, M.I.Mun.E., Cert.B.I., Engineer and Surveyor, 23 Bolton Road, Wednesfield, where Drawings and Conditions of Contract may be examined, upon payment of a deposit of £2 2s., returnable on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in envelope provided, and endorsed "Balmain Crescent—Private Street Works," should be returned to the undersigned not later than 12 Noon on MONDAY, 4th July, 1960.

The Council does not bind themselves to accept the lowest or any Tender.

J. HENWOOD JONES, Clerk of the Council.

Council Offices,  
Alfred Squire Road,  
Wednesfield, Staffs.

## MALVERN URBAN DISTRICT COUNCIL.

WIDENING OF PICKERSLEIGH ROAD.

TENDERS are invited for the WIDENING of PICKERSLEIGH ROAD (Wookey's Corner). Drawings may be inspected at, and Conditions of Contract, Specification, and Bills of Quantities may be obtained from, the office of the Surveyor and Water Engineer, The Council House, Malvern, on payment of a deposit of Two Guineas, which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in envelopes provided, must be received by the undersigned not later than Noon on FRIDAY, 15th JULY, 1960.

The Council does not bind itself to accept the lowest or any Tender.

J. BULMAN, Clerk of the Council.

The Council House,  
Malvern,  
10th June, 1960.

## NEWCASTLE - UNDER - LYME RURAL DISTRICT COUNCIL.

BETLEY SEWERAGE AND SEWAGE DISPOSAL.

The Council invites TENDERS for the CONSTRUCTION of about 100 lin. yd. of SPUN-IRON and 4,000 lin. yd. of GLAZED STONWARE PIPE SEWERS, 12in. and 6in. in dia.; about 200 lin. yd. of SPUN-IRON RISING MAIN, 4in. in dia.; an EJECTOR STATION and SEWAGE DISPOSAL WORKS, comprising Screening and Detritus Tanks, Sedimentation Tanks, Storm Water Tanks, Dosing Chamber, Bacteria Beds, Humus Tanks, Pump House and Pump Well, Sludge Lagoons and incidental Works in accordance with the Drawings, Specification and Bills of Quantities prepared by the Engineers, MESSRS. A. H. S. WATERS AND PARTNERS, of 25 Temple Row, Birmingham, 2.

The Drawings may be seen at, and the General Conditions of Contract, Specification, Bills of Quantities and Form of Tender may be obtained from the offices of the undersigned, or of the Engineers, on or after the 1st July, 1960, on payment of a deposit of Five Guineas, which will be refunded upon receipt of a bona-fide Tender and the return of all documents.

Sealed Tenders, on the form supplied and in the endorsed envelope provided, are to be delivered to me at the address stated below not later than Noon on 12th AUGUST, 1960.

The Council does not undertake to accept the lowest or any Tender.

F. W. RAMM, Clerk of the Council.

Sidmouth Avenue,  
The Brampton,  
Newcastle-under-Lyme,  
Staffs.

16th June, 1960.

## FYLDE WATER BOARD.

TENDERS are invited for the SUPPLY and DELIVERY of a Diesel-powered TRACTOR DIGGER/LOADER. Further particulars from the ENGINEER TO THE FYLDE WATER BOARD, Sefton Street, Blackpool.

Tenders must be received not later than JULY 8th, 1960.

## CONTRACTS

BOROUGH OF MIDDLETON  
TARSPRAYING CONTRACTS, 1960.

TENDERS are invited for the FOLLOWING in connection with the tarpaying of approx. 22,000 sq. yd. during 1960—

- (i) Supply of Granite Chippings.
- (ii) Supply of Premix Basalt/Limestone Chippings.
- (iii) Supply of Tar/Bitumen Binder.
- (iv) Supply of Labour and Plant for the Execution of the Work.

Specifications and Forms of Tender may be obtained from the Borough Engineer, Town Hall, Middleton, near Manchester, on payment of a deposit of Two Guineas (cheques to be made payable to Middleton Corporation), which will be refunded on receipt of a bona-fide Tender, not subsequently withdrawn.

Tenders, in plain sealed envelopes, endorsed "Tenders—Tarpaying," must be received by the undersigned not later than Noon on WEDNESDAY, 13th July, 1960.

The Council does not bind itself to accept the lowest or any Tender.

F. JOHNSTON,  
Town Clerk.

Town Hall,  
Middleton,  
Near Manchester,  
13th June, 1960.

## CITY OF CANTERBURY.

EXTENSION TO THE CATTLE MARKET,  
MARKET WAY.

TENDERS are invited for the EXTENSION of the ABOVE MARKET.

The Works comprise the Laying of approx. 4,000 sq. yd. of 6in. thick Reinforced Concrete Paving to extend the parking area and provide an access road; the Provision of 500 yd. of in-situ Concrete Drainage Channels and approx. 215 yd. of Kerbing, the Extension to the Surface Water Drainage, and all other incidental Works.

Specification, Bills of Quantities and Form of Tender may be obtained from J. E. RHODES, ESQ., City Engineer, Municipal Buildings, Canterbury.

Drawings and Conditions of Contract may be inspected at the above address during normal office hours.

Tenders, in plain sealed envelopes endorsed "Extension to Cattle Market," to be delivered to the undersigned not later than First Post on 4th July, 1960.

The Corporation do not bind themselves to accept the lowest or any Tender.

(Signed) J. BOYLE.

Town Clerk.  
Municipal Buildings,  
Canterbury,  
14th June, 1960.

## THURROCK URBAN DISTRICT COUNCIL.

## ENGINEER AND SURVEYOR'S DEPARTMENT.

WIDENING AND IMPROVEMENT—LOWER DUNTON  
ROAD (C.3), HORNDON-ON-THE-HILL.

TENDERS are invited for the CONSTRUCTION of approx. 3,100 sq. yd. of 6in. CONCRETE CARRIAGEWAY, 2,000 sq. yd. SURFACING WORKS, 750 lin. yd. KERBING, 800 sq. yd. HOGGIN FOOTPATH, 580 lin. yd. SEWER, and ancillary works.

Copies of the Form of Tender, Specification and Bill of Quantities may be obtained from the Engineer and Surveyor, Council Offices, Whitehall Lane, Grays, on payment of £2 2s. deposit, which will be refunded on receipt of a bona-fide Tender.

Drawings and General Conditions of Contract may be inspected at the Council Offices during normal office hours.

Tenders, accompanied by Specification, in a plain sealed envelope endorsed "Lower Dunton Road," must be delivered to reach the undersigned by not later than 12 Noon on TUESDAY, 5th July 1960.

The Council do not bind themselves to accept the lowest or any Tender.

A. E. POOLE,  
Clerk of the Council.

Council Offices,  
Whitehall Lane,  
Grays,  
14th June, 1960.

## BENFLEET URBAN DISTRICT COUNCIL.

## PRIVATE STREET WORKS.

TENDERS will shortly be required for the MAKING-UP of AVONDALE ROAD, SOUTH BENFLEET, CENTRAL AVENUE and SOUTHFIELD DRIVE, HADLEIGH; and for the SEWERING of WENSLEY ROAD, THUNDERSLEY.

The Works comprise approx. 5,740 super. yd. of Concrete Carriageway, 790 lin. yd. of Surface Water Sewer, 3,180 super. yd. of Concrete Footway, 1,920 lin. yd. of Concrete Kerb, and 860 lin. yd. of Foul Water Sewer.

Contractors who desire to receive a Specification, Forms of Tender and Bills of Quantities should make application to the Engineer and Surveyor to the Council not later than 12 Noon on MONDAY, 4th July, 1960.

Applications should be accompanied by a deposit of £2, which will be refunded on receipt of a bona-fide Tender.

D. GRUDGINS,

Clerk of the Council.

Council Offices,  
Thundersley,  
Essex.

## PONTARDAWE RURAL DISTRICT COUNCIL.

## WATER SUPPLY SCHEME AT SALEM, FELINDRE.

TENDERS are invited from contractors experienced in such work for the CARRYING OUT of the ABOVE WATER SUPPLY SCHEME.

The work comprises the Laying of a 1½ in. dia. Polythene Supply Main through fields and roads, together with the necessary House Services. Bills of Quantities and Forms of Tender may be obtained, and Plans and Conditions of Contract inspected at the Engineer and Surveyor's Department, Council Offices, Pontardawe, Glam., on payment of a deposit of £5, made payable to the Pontardawe Rural District Council, which will be returned on receipt of a bona-fide Tender and return of all documents loaned.

Tenders must be submitted in a plain sealed envelope and endorsed "Water Supply Scheme—Salem, Felindre," so as to reach the undersigned not later than 12 Noon on THURSDAY, the 7th of July, 1960.

The Council do not bind themselves to accept the lowest or any Tender. The successful tenderer will be required to execute a bond in the sum of 10 per cent. of the contract price where the surety is a Bank or Insurance Company, for the proper performance and completion of the works.

D. GLYN MEREDITH,

Clerk to the Council.

Council Offices,  
Pontardawe, Glam.,  
16th June, 1960.

## CONTRACTS

## LONDON COUNTY COUNCIL.

EARLS COURT ROAD/CROMWELL ROAD  
INTERSECTION IMPROVEMENT, KENSINGTON.

TENDERS are invited from contractors having experience of large-scale road construction for the WIDENING of CROMWELL ROAD and WEST CROMWELL ROAD at the INTERSECTION with EARLS COURT ROAD and the IMPROVEMENT of the APPROACHES to the INTERSECTION.

Form of Tender, Specification, etc., and Drawings are obtainable from the Chief Engineer upon payment of £3 by crossed cheque or order made payable to the London County Council, which will be returned only if a bona-fide Tender is submitted and not subsequently withdrawn.

Contract and other relevant documents may be inspected on personal application at Room 450D, County Hall, before payment of fee. Remittance by post should be addressed to the Chief Engineer (GS/CJ/1689/6), County Hall, Westminster Bridge, S.E.1.

No Tender received by the CLERK OF THE COUNCIL after 3 p.m. on MONDAY, 18th July, 1960, will be considered.

The Council does not bind itself to accept the lowest or any Tender.

## COUNTY BOROUGH OF WALLASEY.

## UPTON ROAD—SANDBROOK LANE.

## STORM WATER OUTFALL SEWER.

TENDERS are invited, by 10 a.m. on WEDNESDAY, 13th July, for the LAYING of approx. 1,600 lin. yd. of CONCRETE PIPES varying in size from 21 in. to 36 in. dia., together with approx. 500 lin. yd. of 9 in. dia. SALT GLAZED WARE PIPES, and other incidental works.

Forms of Tender, together with copies of Conditions, Specifications and Quantities, obtainable from the Borough Engineer, Town Hall, Wallasey, on payment of a deposit of £5 5s., which will be returned on receipt of a bona-fide Tender.

A. G. HARRISON,  
Town Clerk.

## BOROUGH OF WEMBLEY.

## DEVELOPMENT OF SHERRENS FARM OPEN SPACE.

TENDERS, which must be received not later than Noon on 13th JULY, 1960, are invited for the ABOVE WORK, which comprises Removal of Concrete Foundations, Grading, Cultivating and Seeding Six Acres, and Construction of Children's Playground.

Form of Tender, Specification and Conditions may be obtained from the BOROUGH ENGINEER AND SURVEYOR, Town Hall, Wembley, at whose Office Conditions of Contract and Drawings may be inspected.

## BOROUGH COUNCIL OF WESTON-SUPER-MARE.

BOURNVILLE HOUSING ESTATE—REPLACEMENT OF  
TEMPORARY BUNGALOWS WITH PERMANENT  
HOUSING UNITS.

TENDERS are invited for the ERECTION of 108 DWELLINGS in TRADITIONAL CONSTRUCTION on the ABOVE ESTATE, comprising of 12 Maisonnettes in One Three-storey Block (with garages on ground floor), and 96 Three-bedroom Houses. Also 42 Lock-up Garages will be provided, together with Access Roads and Concrete Drains for future garages. The development will take place on sites at present occupied by temporary bungalows, and access roads are therefore in existence. The Contract will include certain site works.

Bills of Quantities and Forms of Tender may be obtained from the Council's Quantity Surveyors, MESSRS. BANKS, WOOD AND PARTNERS, of 41 Alma Road, Clifton, Bristol, 8, on deposit of Two Guineas, which will be returned on receipt of a bona-fide Tender. (Cheques to be made payable to "Weston-super-Mare Corporation.")

Tenders should be returned in the envelope provided, so as to reach me not later than Noon on 21st JULY, 1960.

It is not binding upon the Council to accept the lowest or any Tender, and final acceptance will be subject to the approval of the Ministry of Housing and Local Government.

R. G. LICKFOLD,  
Town Clerk.

Town Hall,  
Weston-super-Mare,  
10th June, 1960.

## URBAN DISTRICT COUNCIL OF CHESHUNT.

## CONTRACT NO. 374.

## PRIVATE STREET WORKS.

TENDERS are invited for the MAKING-UP of CADMORE LANE, Cheshunt, Herts. Length 625 yd.

Bills of Quantities, Specification and Form of Tender may be obtained from the Engineer and Surveyor, at GOXHILL, in the office of the Engineer and Surveyor, Manor House, Cheshunt, on payment of a deposit of £2.

Tenders shall be returned, in the envelope provided, to the undersigned, not later than 12 Noon on FRIDAY, 15th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

G. S. NEWMHAM,  
Clerk of the Council.

## GLANFORD BRIGG RURAL DISTRICT COUNCIL.

## GOXHILL SEWERAGE SCHEME.

CONTRACT NO. 6—HOUSE CONNECTIONS IN  
PRIVATE LANDS.

TENDERS are invited for the LAYING of approx. 6,000 yd. of 4 in. and 6 in. dia. STONEWARE HOUSE CONNECTIONS in PRIVATE LANDS, together with Inspection Chambers and Telemetry at GOXHILL, in the Glanford Brigg Rural District of Lincolnshire.

Contractors wishing to Tender for these Works should apply to the Clerk of the Council's Consulting Engineers, JOHN H. HAISTE AND PARTNERS, Belmont House, 20 Wood Lane, Headingley, Leeds, 6, enclosing a deposit cheque value Three Guineas, made payable to the Glanford Brigg Rural District Council, such deposit to be refunded upon receipt of a bona-fide Tender and the return of all documents.

Tenders, with the Bills of Quantities priced in ink, are to be submitted to the undersigned not later than 9.30 a.m. on the 7th JULY, 1960.

The Council do not bind themselves to accept the lowest or any Tender they may receive.

M. W. BAILEY,  
Clerk of the Council.

Rural Council Offices,  
Bigby Street,  
Brigg, Lincs.,  
14th June, 1960.

## CONTRACTS

## METROPOLITAN BOROUGH OF WANDSWORTH.

## FLATS AT STREATHAM.

Contractors wishing to TENDER for ERECTION of a THREE-STORY BLOCK of 23 FLATS at STREATHAM, HIGH ROAD should submit names to me by 29th JUNE, 1960, giving details of experience, plant and technical and supervisory staff available, together with names of two technical and two financial referees. Bills of Quantities will be issued to selected contractors in due course.

Drawings may be examined at Borough Engineer and Architect's Department at this address.

J. NOEL MARTIN,  
Town Clerk.

Municipal Buildings,  
Wandsworth, S.W.18.

## BOROUGH OF HESTON AND ISLEWORTH.

REMOVAL OF WOOD BLOCKS AND SURFACING  
WITH HOT ROLLED ASPHALT.

TENDERS are invited for the ABOVE-MENTIONED WORK on a 700 yd. long section of HIGH STREET, HOUNSLOW. Conditions of Contract and Drawing may be seen at and Form of Tender obtained from the Borough Engineer's Department, 88 Lampton Road, Hounslow, on deposit of £2 2s. (returnable for bona-fide Tenders submitted and not subsequently withdrawn). Tenders, in endorsed envelopes supplied, not indicating the tenderer, to be received by me by 10 a.m. on 7th JULY, 1960. The Council are not bound to accept any Tender.

D. MATHIESON,  
Town Clerk.

Town Hall,  
Hounslow, Middlesex.

## BOROUGH OF MIDDLETON.

## FOOTPATH RECONSTRUCTION WORKS.

## FLAGGING AND ASPHALT.

TENDERS are invited for the ABOVE WORK, comprising the Laying of approx. 1,250 lin. yd. Precast Concrete Kerb, 600 sq. yd. Flagging, and 1,900 sq. yd. Asphalt (sand carpet).

Copies of the Conditions of Contract, Specification, Bills of Quantities and Form of Tender may be obtained on application to the Borough Engineer and Surveyor, Town Hall, Middleton, near Manchester, and should be duly completed and returned, in plain sealed envelopes endorsed "Footpath Reconstruction Works," to the undersigned not later than 12 Noon on WEDNESDAY, 13th July, 1960.

The Council does not bind itself to accept the lowest or any Tender.

F. JOHNSTON,  
Town Clerk.

Town Hall,  
Middleton,  
Near Manchester,  
13th June, 1960.

## CITY AND COUNTY OF NEWCASTLE UPON TYNE.

THE HOUSING COMMITTEE OF THE CORPORATION  
are prepared to receive TENDERS for the ERECTION  
of 22 MAISONNETTES in FOUR-STORY BLOCKS,  
77 HOUSES and 47 GARAGES on WALKER ROAD,  
in the Walker Redevelopment Area.

Bills of Quantities and Form of Tender may be obtained on application in writing from the City Architect, 18 Cloth Market, Newcastle upon Tyne, 1, where Plans and Conditions of Contract may be seen. Sealed Tenders must reach the City Architect not later than 10 a.m. on TUESDAY, 4th July, 1960.

No Tender will be received except in the official envelope, which must not bear any name or mark indicating the sender.

The Committee does not bind themselves to accept the lowest or any Tender.

JOHN ATKINSON,  
Town Clerk.

Town Hall,  
Newcastle upon Tyne, 1,  
14th June, 1960.

## BANSTEAD URBAN DISTRICT COUNCIL.

BRIGHTON ROAD (A.217)—DUAL CARRIAGEWAY  
SCHEME—BURGH HEATH TO BANSTEAD CROSS  
ROADS.

TENDERS are invited from civil engineering contractors having considerable experience in the execution of works of this nature, for the WIDENING and RECONSTRUCTION of BRIGHTON ROAD, BANSTEAD from BURGH HEATH to BANSTEAD CROSS ROADS.

The Works comprise the Construction of a Dual Carriageway, approx. 1½ miles in length, with Footpath, Surface Water Drains and incidental Works. Construction is to be Lean Rolled Concrete, Surfaced with approx. 57,000 sq. yd. of Bituminous Material.

Copies of Drawings, Specification, Bills of Quantities, Form of Tender and Conditions of Contract may be obtained from MR. H. CARMICHAEL, M.I.Mun.E., Engineer and Surveyor, The Council House, Brighton Road, Banstead, upon payment of a deposit of £10, returnable upon receipt of a bona-fide Tender not subsequently withdrawn.

Tenders, in plain sealed envelopes endorsed "Tender for Brighton Road, A.217—Improvement," and not bearing any name or mark indicating the sender, must be returned to the undersigned not later than MONDAY, 8th August, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

F. L. SHAW,  
Clerk of the Council.

10th June, 1960.

## STOURBRIDGE MAIN DRAINAGE BOARD.

## DIVERSION OF EASTERN MAIN SEWER.

TENDERS, on a Fixed-price Basis, are invited for the CONSTRUCTION IN TUNNEL of approx. 70 yd. 12 in. and 6 in. dia. CONCRETE AND GLAZED STONEWARE PIPE SEWERS, together with a Manhole and Service Connections, at BIRMINGHAM STREET, Stourbridge.

Contractors wishing to tender should apply for the documents to the Board's Consulting Engineers, JOHN H. HAISTE AND PARTNERS, 10c Hagley Road, Stourbridge, enclosing a deposit cheque value Two Guineas, made payable to the Stourbridge Main Drainage Board, such deposit to be refunded upon receipt of a bona-fide Tender and the return of all documents. Drawings may be inspected by appointment at the Offices of the Consulting Engineers.

Documents to be submitted to the undersigned not later than Noon on THURSDAY, 14th July, 1960.

The Board do not bind themselves to accept the lowest or any Tender they may receive.

A. P. DRURY,  
Clerk of the Board.

Council House,  
Stourbridge.

## CONTRACTS

COUNTY BOROUGH OF GATESHEAD.  
ANNUAL TENDERS.

TENDERS are invited for the SUPPLY of the FOLLOWING MATERIALS for the 12 months ending 30th September, 1961:—  
Broken Whinstone and Whinstone Chippings.  
Cement.  
Concrete Flags and Kerbs.  
Concrete Pipes and Manhole Fittings.  
Salt Glazed Ware Pipes.  
Sand and Gravel.  
Tar and Bitumen Macadam.  
Tender documents may be obtained from the Borough Surveyor, Swinburne Street, Gateshead, 8. Tenders, in a plain sealed envelope, endorsed "Annual Tenders, 1960," must reach the undersigned not later than 12 Noon on MONDAY, 11th July, 1960.  
C. D. JACKSON, Town Clerk.

Town Hall,  
Gateshead, 8.  
June, 1960.

## BOROUGH OF WISBECH.

## TINKERS DROVE HOUSING SITE.

## ROADS AND SEWERS—CONTRACT NO. 208.

TENDERS are invited for the CONSTRUCTION of ROADS, SEWERS and incidental works at TINKERS DROVE HOUSING SITE, Wisbech, comprising approx. 2,286 sq. yd. of LEAN-MIX CONCRETE CARRIAGEWAY, 870 lin. yd. of KERB and 366 lin. yd. of 9in. dia. SEWERS.  
Forms of Tender, Bills of Quantities, Specification and Plans may be obtained from the Borough Engineer and Surveyor, Church Terrace, Wisbech, Cambs., upon deposit of Two Guineas, to be refunded upon receipt of a bona-fide Tender and return of all documents.  
All Contracts are subject to Standing Orders of the Council with respect to Contracts.  
Tenders, to be endorsed "Tinkers Drove Housing Site—Roads and Sewers," and forwarded in the envelope provided to reach the undersigned not later than 12 Noon on SATURDAY, 16th July, 1960.  
N. E. DEWICK, Town Clerk.

Town Hall,  
Wisbech,  
16th June, 1960.

## BOROUGH OF LISKEARD.

The Borough Council of Liskeard propose to BUILD 66 HOUSES, 15 BUNGALOWS and 30 GARAGES, etc., as the second stage of DEVELOPMENT of the HOUSING ESTATE at LAKE LANE.

Contractors who wish to be considered for inclusion in a list of similar tenders for the above dwellings, etc., together with road works, drainage and other site works, are invited to send their names to G. R. VAUGHAN ELLIS, A.R.I.B., chartered, Trehawke House, Liskeard, Cornwall, by not later than 11th July, 1960.

Such applications are to be accompanied by details of works of a similar nature of which the contractors have had adequate experience in the past.  
Contractors to be invited to tender will be selected by the Council, who may add to the list.  
R. SCARD MORGAN, Town Clerk and Solicitor.

## BOROUGH OF HORNSEY.

TENDERS are invited for PAVING and KERBING for the 12 months commencing 1st July, 1960. BOROUGH ENGINEER, Town Hall, Crouch End Broadway, N.8, for tender documents. Tenders to be received by Noon on FRIDAY, July 1st, 1960.

## BOROUGH OF EALING.

CONSTRUCTION OF EIGHT FLATS—  
WINDSOR ROAD, W.5.

Forms of Tender obtainable from Borough Surveyor, Town Hall, W.5, upon payment of deposit of £5, returnable on receipt of a bona-fide Tender, addressed to TOWN CLERK, Town Hall, Ealing, W.5. Closing date, 9 a.m., 21st July, 1960.

## BOROUGH OF COLCHESTER.

## RESURFACING WORKS.

TENDERS are invited for the FOLLOWING WORKS:  
(a) London Road (Trunk Road A.12), approx. 6,000 sq. yd.  
(b) St. John's Street and Stanwell Street (B.1422), approx. 2,200 sq. yd.

Heating, Planning and Resurfacing in Granite Asphalt, together with Reshaping Junctions and Kerbing and Paving Works.  
Plans may be inspected and the Conditions of Contract, Specification, Bills of Quantities and Forms of Tender may be obtained from the Office of the undersigned on payment of a deposit of Two Pounds, which will be refunded on receipt of a bona-fide Tender and return of all documents.

Tenders, in plain sealed envelopes, endorsed "Resurfacing Works, 1960," bearing no mark or indication of the sender, must be delivered to the undersigned not later than Noon on FRIDAY, 8th July, 1960.

The Council does not bind itself to accept the lowest or any other Tender.

J. S. ORCHARD, A.M.I.C.E., Borough Engineer.

1 West Stockwell Street,  
Colchester, Essex.

## CITY OF LEEDS.

## HIGHWAYS DEPARTMENT.

The HIGHWAYS COMMITTEE of the LEEDS CITY COUNCIL invite TENDERS for:—  
KERBING, TARMACADAM FOOTPATHS and CARRIAGEWAYS in the FOLLOWING PRIVATE STREETS:—  
Ferncliffe Terrace,  
Roscliffe Mount,  
Roscliffe Terrace.

Forms of Tender and Bills of Quantities may be obtained upon payment of a deposit of One Guinea, which amount will be returned upon receipt of a bona-fide Tender. Plans, Specifications and copies of the documents forming the contract may be inspected upon application to the Highways Engineer, 155 Kirkstall Road, Leeds, 4.

Tenders will be considered only when submitted sealed in the envelope provided, endorsed "Highways Department—Tender for Contractors' Works," and not bearing any name or mark indicating the sender. Tenders must be delivered at the Town Clerk's Office (Committee Department), Room 57, Civic Hall, Leeds, 1, not later than 10 a.m. on THURSDAY, 7th July, 1960.  
The lowest or any Tender will not necessarily be accepted.

W. J. HISCOCK, Highways Engineer.

June, 1960.

## CONTRACTS

## BUCKS COUNTY COUNCIL.

## LONDON-FISGUARD TRUNK ROAD, A.40.

## WESTERN AVENUE CANAL BRIDGE TO DENHAM ROUNDABOUT.

TENDERS are invited for ROADWORKS (approx. 1,000 yds.) on the NORTH CARRIAGEWAY, comprising Widening, Haunching and Channelling in Concrete and Rolled Concrete, Kerbing, Drainage, and the Completion of Carriageway Foundation with a Layer of Rolled Concrete, together with Asphalt Surfacing and other ancillary Works.  
Drawings may be seen at the offices of the County Surveyor's Department, Park Street, Aylesbury, and Contract documents may be obtained from the County Surveyor, County Offices, Aylesbury, on deposit of £2, returnable on receipt of a bona-fide Tender.  
Tenders must reach the undersigned by 10 a.m. on MONDAY, 25th July, 1960.

R. E. MILLARD, Clerk of the Council.

County Hall,  
Aylesbury.

## CITY OF BIRMINGHAM.

## TO BUILDING CONTRACTORS.

CONTRACT 715—  
14 ONE- AND TWO-STOREY DWELLINGS,  
WOODCOCK LANE, NORTHFIELD.CONTRACT T.50/17—  
TENANTS' MEETING ROOM, HOLLOWAY,  
LEY HILL ESTATE, NORTHFIELD.CONTRACT 711A—SINGLE-STOREY SHOP,  
MILLPOOL HILL ESTATE, WARSTOCK.

The House Building Committee invite FIRM-PRICE TENDERS for the ERECTION of the ABOVE.  
Bills of Quantities and Forms of Tender will be forwarded on payment of £3 2s. for each Contract at the office of A. G. SHEPPARD FIDLER, City Architect, Civic Centre, Birmingham, 1, to whom all cheques should be made payable. Applications should be made by 28th June, 1960.  
Conditions of Contract (which include the usual Fair Wages and Conditions of Labour Clause) may be seen at the City Architect's office during normal working hours.

The deposits will be returned on receipt of bona-fide Tenders or on notation of inability to Tender, together with the return of the documents not later than three days before the date for receipt of Tenders.

Tenders, enclosed in the envelope provided for the purpose, must be sealed and delivered to the Town Clerk's Office (Room B.31), Council House, Birmingham, 1, not later than 12 Noon on THURSDAY, 28th July, 1960. Tenders received after that time will be rejected.

The Committee do not bind themselves to accept the lowest or any Tender.

T. H. PARKINSON, Town Clerk.

The Council House,  
Birmingham, 1.

THE URBAN DISTRICT COUNCIL OF  
ESTON.ERECTION OF 204 DWELLINGHOUSES—  
CHURCH LANE ESTATE, ESTON (SECTION 1).

FIXED-PRICE TENDERS are invited for the ERECTION of 204 DWELLINGHOUSES on the ABOVE-NAMED ESTATE.  
Copies of the Bills of Quantities and Forms of Tender may be obtained from N. C. HARRISON, A.M.I.C.E., M.I.Mun.E., Engineer and Surveyor, 246 Normanby Road, South Bank, Middlesbrough, on payment of a deposit of Five Guineas in respect of the documents, which will be refunded on receipt of a bona-fide Tender (not subsequently withdrawn) or the return of the documents before the date given below for the receipt of the Tenders.

Tenders, in plain sealed envelopes endorsed "Tender for Houses" but not bearing any name or mark indicating the sender, must reach me by Noon on TUESDAY, the 12th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

T. MYRDDIN BAKER, Clerk of the Council.

Council Offices,  
Grange Town-on-Tees,  
16th June, 1960.

THE URBAN DISTRICT COUNCIL OF  
ESTON.CONSTRUCTION OF ROADS AND SEWERS—  
CHURCH LANE HOUSING ESTATE, ESTON  
(SECTION 1).

FIXED-PRICE TENDERS are invited for the ERECTION of the ABOVE-NAMED WORKS.

Copies of the Special Conditions, Specification and Bills of Quantities and Forms of Tender, may be obtained from MR. N. C. HARRISON, A.M.I.C.E., M.I.Mun.E., Engineer and Surveyor, 246 Normanby Road, South Bank, Middlesbrough, Yorks., on payment of a deposit of £3 3s. which will be refunded on submission of a bona-fide Tender (not subsequently withdrawn) or the return of all Tender documents before the closing date for the receipt of Tenders.

The General Conditions of Contract and the Drawings may be inspected at the above address during normal working hours.

Tenders, in plain sealed envelopes endorsed "Tender for Church Lane Roads and Sewers" but not bearing any name or mark indicating the sender, must reach me by Noon on WEDNESDAY, the 13th July, 1960.  
The Council do not bind themselves to accept the lowest or any Tender.

T. MYRDDIN BAKER, Clerk of the Council.

Council Offices,  
Grange Town-on-Tees,  
16th June, 1960.

URBAN DISTRICT COUNCIL OF  
BASILDON.

## WICKFORD INDUSTRIAL ESTATE.

## SITE PREPARATION WORKS.

TENDERS will shortly be invited for the ABOVE WORKS, comprising the CONSTRUCTION of 304 yd. of 21in. and 24in. dia. Surface Water Sewer, 300 yd. of 9in. dia. Foul Sewer, 2,350 sq. yd. of 8in. Reinforced Concrete Carriageway, and 1,150 sq. yd. of Tarmac Macadam Footways together with Kerbing, Edging, Grass Verges, etc. Experienced contractors wishing to tender should apply to the Council's Engineer and Surveyor, MR. A. WADSWORTH, A.M.I.C.E., A.M.I.Mun.E., Council Offices, 88 Town Square, Basildon, Essex, for Tender documents not later than 10.30 a.m. on 13th July, 1960, the application to be accompanied by a deposit of Two Guineas (£2 2s.), which will be refunded on receipt of a bona-fide Tender not subsequently withdrawn and the return of Tender documents.

The Council do not bind itself to accept the lowest or any Tender.

The Council do not bind itself to accept the lowest or any Tender.

## CONTRACTS

## BOROUGH OF WOKINGHAM.

## ROADWORKS.

TENDERS are invited for the CONSTRUCTION of ROADS, FOOTPATHS, SURFACE WATER SEWERS, and all appurtenant works connected with a Scheme for the Erection of 21 Houses on Commons Road Housing Site.

Full details, Plans and Specification may be obtained from the Borough Surveyor on payment of a deposit of £2 2s., returnable on submission of a bona-fide Tender.

Tenders must be sent to me not later than 22nd JULY, 1960.

L. GODDARD SMALLEY, Town Clerk.

Town Hall,  
Wokingham, Berks.  
17th June, 1960.

## BOROUGH OF LUTON.

## PRIVATE STREET WORKS.

TENDERS are invited for MAKING-UP parts of MACALAY and HAYHURST ROADS.  
Total work includes Construction of approx. 123 lin. yd. Carriageway, 65 lin. yd. 9in. Sewer, together with paving and ancillary works.

Tender documents from Borough Engineer, Town Hall, Luton, on payment of £2 2s. deposit for each set of documents, returnable after receipt of a bona-fide Tender, not subsequently withdrawn. Cheques payable to "Luton Corporation." Tenders to TOWN CLERK, Town Hall, Luton, by Noon, MONDAY, 11th July, 1960.

## BOROUGH OF REIGATE.

ONE BLOCK OF 16 MAISONNETTES WITH STORES UNDER AND ONE BLOCK OF 6 MAISONNETTES—THE DOME ESTATE (NORTH STREET), REDHILL.

FIXED-PRICE TENDERS invited, based upon Bills of QUANTITIES for SUBSTRUCTURE and SITE WORKS, and lump sum for SUPERSTRUCTURE. Form of Tender, Specification, Bills of Quantities and Plans obtainable from Borough Surveyor, Town Hall, Reigate, on payment of deposit of £2 2s. Closing date for receipt of Tenders, Noon, 21st July, 1960.

HEBER DAVIES, Town Clerk.

Town Hall,  
Reigate.

## BOROUGH OF HERTFORD.

STREET LIGHTING CONVERSION AND  
IMPROVEMENT SCHEME.

The CORPORATION propose to CARRY OUT the ABOVE SCHEME during 1960 and 1961, and intend to invite TENDERS from short lists of erection contractors, column manufacturers, and suppliers of lanterns and equipment. Experienced firms are now invited to submit their names for inclusion on these lists.

The scheme will include:—

- 30 400-Watt Mercury Fluorescent Units in the Town Centre.
- 268 200-Watt and 140-Watt Sodium Units on the Main Traffic Routes.
- 203 60-Watt Sodium Units on the Secondary Traffic Routes.
- 338 100-Watt Tungsten Units, using existing gas lamp columns, in Residential Areas.

Applications by letter, in suitably endorsed envelopes, to be received by the Town Clerk not later than 9 a.m. on WEDNESDAY, the 13th July, 1960.

A. I. CLOUGH, Town Clerk.

The Castle,  
Hertford,  
16th June, 1960.

## BOROUGH OF ROMFORD.

## PURCHASE OF TWO 4-WHEEL MARKET TRAILERS.

TENDERS are invited for the SUPPLY and DELIVERY of TWO 4-WHEEL MARKET TRAILERS. Particulars and Tender Forms on application to the Borough Engineer and Surveyor, Town Hall, Romford. Completed Tenders to be returned to the Town Clerk not later than 4th JULY.

JOHN E. SYMONS, Town Clerk.

Town Hall,  
Romford,  
14th June, 1960.

CITY AND COUNTY OF KINGSTON UPON  
HULL.

## RESIDENTIAL AREA 1A, REF. 113A.

## LAND SOUTH OF BOOTHFERRY ROAD.

## STAGE 1—ADDITIONAL SERVICE ROADS.

## ROAD AND SEWER WORKS.

The Kingston upon Hull Corporation invite TENDERS for the CONSTRUCTION of approx. 6,000 sq. yd. of CONCRETE ROAD and 725 lin. yd. of SEWER on the PERMANENT HOUSING SITE, Ref. No. 113A, Residential Area No. 1A—Land South of Boothferry Road.

Particulars and Conditions from the City Engineer, on payment of £2 to the City Treasurer, which will be refunded on receipt of a bona-fide Tender and all documents duly completed. Tenders to be delivered at the Town Clerk's office not later than 11 a.m. on the 11th July, 1960.

WM. MORRIS, O.B.E., City Engineer.

DROYLSDEN URBAN DISTRICT  
COUNCIL.ERECTION OF 12 HOUSES, GREENSIDE LANE,  
DROYLSDEN.

TENDERS are invited for the ERECTION of SIX PAIRS of THREE-BEDROOM HOUSES at GREENSIDE LANE, Droylsden.

Drawings may be seen at the office of the Architect, FRANK BRADLEY, ESQ., F.R.I.B.A., Penny Bank Chambers, 4 Wood Street, Bolton, from whom Specification, Bills of Quantities and Form of Tender may be obtained on payment of a deposit of £3 3s., which will be returned on receipt of a bona-fide Tender.

Tenders, sealed and endorsed "Tender for Greenside Lane Houses," should reach the undersigned not later than 2 p.m. within 14 days from the date of this advertisement.

The Council do not bind themselves to accept the lowest or any Tender, and the acceptance of a Tender will be subject to the approval of the Ministry of Housing and Local Government.

G. S. HEPTON, Clerk of the Council.

Council Offices,  
Droylsden,  
Lancs.

## CONTRACTS

## BOROUGH OF HORNSEY.

TENDERS are invited to the SUPPLY of approx. 800 tons of SLAG or IGNEOUS CHIPPINGS. Specification and tender documents from the Borough Engineer and Surveyor, to be returned by Noon on MONDAY, 11th July, 1960.

W. B. MURGATROYD,  
Town Clerk.

## BOROUGH OF BATLEY.

HYRSTLANDS RECREATION GROUND—  
BOWLING GREEN AND TENNIS COURTS.

TENDERS are invited for the CONSTRUCTION of One CROWNED BOWLING GREEN and Four TENNIS COURTS, including all ancillary Earthworks, Stone Walling, etc.

A copy of the Specification and Bill of Quantities may be obtained on application to the Borough Engineer, Hanover Street, Batley.

Tenders, in a plain sealed envelope (not bearing any name or mark indicating the sender), endorsed "Hyrstlands Recreation Ground," must be delivered to the undersigned by First Post on SATURDAY, 9th July, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

L. O. BOTTOMLEY,  
Town Clerk.

Town Hall,  
Batley.

BOROUGH OF BEDDINGTON AND  
WALLINGTON.

## TENNIS COURTS.

TENDERS are invited for the COMPLETE RENEWAL of SURROUND NETTING, POSTS, etc., to Four TENNIS COURTS at ROUNDSHAW, Wallington.

Tender documents may be obtained from the Borough Engineer, Town Hall, Wallington, Surrey. Closing date for receipt of Tenders, THURSDAY, 28th July, 1960.

A. B. BATEMAN,  
Town Clerk.

BARNSELY CORPORATION  
WATERWORKS.MECHANICAL PLANT STORE—  
SCOUT DIKE YARD, PENISTONE.

Experienced building contractors who wish to be invited to TENDER for the CONSTRUCTION of the ABOVE, a Two-storey Building (capacity, 50,000 cu. ft.) in imitation Sneked Walling, are asked to submit their names not later than the 1st July, 1960, together with details of similar work executed, to the Waterworks Engineer and Manager, Town Hall, Barnsley, for consideration.

A. E. GILFILLAN,  
Town Clerk.

Town Hall,  
Barnsley.

June, 1960.

## CITY OF LINCOLN.

## ERMINE ESTATE RECREATION GROUND.

TENDERS invited for SEEDING of 11 acres PLAYING FIELD, 1.100yd. of FENCING, and ancillary works.

Applications for documents to City Engineer and Surveyor, Silver Street, Lincoln, accompanied by a deposit of Two Guineas (cheques payable to Lincoln Corporation), refunded upon receipt of bona-fide Tender, not subsequently withdrawn. General Conditions of Contract and Plans may be inspected at the City Engineer's Office.

Tenders, in plain sealed envelopes, endorsed "Tender—Recreation Ground," must be delivered to the undersigned not later than SATURDAY, 16th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

J. HARPER SMITH,  
Town Clerk.

Town Clerk's Office,  
Saltergate,  
Lincoln.

ASHFORD (KENT) URBAN DISTRICT  
COUNCIL.

## GODINTON OUTFALL SOIL SEWER.

TENDERS are invited for the CONSTRUCTION of approx. 500yd. of 15in. dia. PRECAST CONCRETE PIPE SEWER, INVERTED SIPHON and ancillary works.

Tender documents are obtainable from the Surveyor, 1 Elwick Road, Ashford, Kent.

Tenders, in the envelope provided, to be returned to the undersigned not later than the 15th JULY, 1960.

G. H. REDFERN,  
Clerk of the Council.

Council Offices,  
Church Road,  
Ashford, Kent.  
18th June, 1960.

## BATHAVON RURAL DISTRICT COUNCIL.

## ERECTION OF TWO HOUSES, CORSTON.

TENDERS are invited for the ERECTION of a Pair of SEMI-DETACHED HOUSES on the Council's land at CORSTON.

Applications for tender documents should be made by not later than SATURDAY, 9th July, 1960, to the Council's Architect, P. KENNERELL POPE, Esq., A.R.W.A., A.R.I.B.A., 18 Brook Street, Bath, accompanied by a deposit of Two Guineas (by cheque payable to Bathavon R.D.C.), which will be refunded on receipt of a bona-fide Tender and the return of the tender documents.

The Council's Architect will advise contractors of the latest date for receipt of Tenders.

The Council does not bind itself to accept the lowest or any Tender.

S. G. FOXTON PRICE,  
Clerk of the Council.

Council Offices,  
Westgate Buildings,  
Bath.  
22nd June, 1960.

BATH FIRE BRIGADE AND AMBULANCE  
SERVICE.

TENDERS are invited for the SUPPLY of the FOLLOWING—

- (1) 146 Blue Shirts.
- (2) 15 White Shirts.
- (3) 156 Black Ties.

Tender Forms obtainable from the Chief Fire Officer, Central Fire Station, Bath, and Tenders should be submitted to the undersigned not later than WEDNESDAY, 6th July, 1960.

JARED E. DIXON,  
Town Clerk.

Guildhall,  
Bath.  
17th June, 1960.

## CONTRACTS

## DERBYSHIRE COUNTY COUNCIL.

## BRIDGES AND HIGHWAYS DEPARTMENT.

## DERBY-NOTTINGHAM TRUNK ROAD, A.52.

## BORROWWASH BY-PASS SURFACING.

TENDERS are invited for SUPPLYING and LAYING a HOT-ROLLED ASPHALT REGULATING COURSE and a 1½in. COMPACTED THICKNESS WEARING COURSE. The Works comprise Dual 24ft. Carriage-ways and Approach Roads thereto, and contain an area of approx. 77,000 sq. yd.

For Tender and Specification from the County Surveyor, County Offices, Matlock, Derbyshire. Tenders, in plain sealed envelopes endorsed "Borrowwash By-pass Surfacing, B. and H." to be delivered to the Clerk of the County Council, County Offices, Matlock, by 6th JULY, 1960.

The Council does not bind itself to accept the lowest or any Tender.

S. MEHEW,  
County Surveyor.

County Offices,  
Matlock.

## COUNTY BOROUGH OF DUDLEY.

## RESURFACING OF ROADS.

APPLICATIONS to TENDER are invited for the ABOVE CONTRACT, which provides for the RESURFACING of THREE SEPARATE LENGTHS of CARRIAGEWAY in WELLINGTON ROAD and SOUTHALLS LANE, WOLVERHAMPTON STREET (part), and HIGH STREET and CASTLE STREET (part), within the Borough, and consists of the FOLLOWING WORKS—

Heating and Planing approx. 12,550 sq. yd. of Existing Surfacing, Taking Up approx. 2,060 sq. yd. of Granite Setts Paving, and Resurfacing approx. 14,600 sq. yd. with Hot-rolled Asphalt, together with ancillary Work.

Applications must be submitted to the Borough Engineer, The Council House, Dudley, Worcs., together with a deposit of £2 2s., which will be returned on receipt of a bona-fide Tender not subsequently withdrawn and the return of all documents.

The latest date for receipt of applications is FRIDAY, 1st July, 1960, and Tender documents will be forwarded as soon as possible after that date.

P. D. WADSWORTH,  
Town Clerk.

The Council House,  
Dudley,  
Worcestershire.  
17th June, 1960.

## BOROUGH OF TIPTON.

## PROTECTIVE CLOTHING.

QUOTATIONS are invited for the SUPPLY of PROTECTIVE CLOTHING for a period of 12 months. Detailed list and quantities of each type of clothing required will be forwarded on application to the Borough Engineer and Surveyor, Municipal Buildings, Sedgley Road West, Tipton.

Quotations must be delivered to the undersigned not later than First Post on WEDNESDAY, the 6th of July, 1960.

K. W. MADIN,  
Town Clerk.

Municipal Buildings,  
Sedgley Road West,  
Tipton.

## BOROUGH OF HARTLEPOOL.

## PREPARATION OF HOUSING SITES.

CONSTRUCTION OF ROADS, FOOTPATHS AND  
SEWERS.

TENDERS are invited for the CONSTRUCTION of PRIORATORY SITE WORKS to a SITE NORTH of KING OSWY DRIVE, which is to be used for the Erection of Council Houses.

The Work involves the Construction of 550yd. of Sewer increasing in size from 6in. to 12in., approx. 700yd. of Kerbing, Construction of 2,500 sq. yd. of Carriageway in Wetmix and Bituminous Macadam, together with other ancillary Works.

Plans may be inspected at, and Bills of Quantities and Forms of Tender may be obtained from, the office of the Borough Engineer, Borough Buildings, Hartlepool, on payment of a deposit of £2, which will be refunded on receipt of a bona-fide Tender.

Tenders, in plain sealed envelopes endorsed "Tender—Preparation of Housing Sites, North of King Oswy Drive," must be delivered to the undersigned not later than 12 Noon, MONDAY, 11th July, 1960.

L. O. WILLIAMS,  
Town Clerk.

Borough Buildings,  
Hartlepool.

## CITY OF MANCHESTER.

TENDERS invited for the SUPPLY and ERECTION of HOT WATER HEATING INSTALLATION and MODIFICATIONS to existing HEATING at NEW MOSTON SECONDARY SCHOOL.

Specification and Drawings from CITY ARCHITECT, P.O. Box 488, Town Hall, Manchester.

Tenders returnable by JULY 7th.

## CITY OF MANCHESTER.

TENDERS invited to the ERECTION of WORKSHOP, STAGE, LAVATORY ACCOMMODATION and ALTERATIONS at CHEETHAM ADULT EDUCATION CENTRE, CHEETHAM HILL.

Bill of Quantities from CITY ARCHITECT, P.O. Box 488, Town Hall.

Tenders returnable by JULY 13th.

LEATHERHEAD URBAN DISTRICT  
COUNCIL.

TENDERS are invited for FOOTPATH WORKS, including Kerbing, within the Urban District.

Tender documents can be obtained and Drawings inspected at the Engineer and Surveyor's Department, Red House, Leatherhead.

Tenders, in the envelopes provided, to be delivered to the undersigned by Noon, 14th JULY, 1960.

E. DE,  
Clerk of the Council.

Council Offices,  
Leatherhead.

## FYLDE WATER BOARD.

## 30IN. MAIN—WHITEWELL TO BLACKBURN.

TENDERS are required for the SUPPLY and DELIVERY at the Board's Fort Street Depot, Blackburn, of the FOLLOWING—

- (a) Wrought-iron Wicket Gates.
- (b) Stone Gate Posts.
- (c) Field-type Manhole Covers.

Further particulars and tender documents from Engineer, FYLDE WATER BOARD, Sefton Street, Blackpool.

Tenders must be received not later than JULY 14th, 1960.

## CONTRACTS

## SURREY COUNTY COUNCIL.

## HIGHWAYS AND BRIDGES DEPARTMENT.

TENDERS are invited for DEMOLITION and RECONSTRUCTION of approx. 20ft. MASS CONCRETE RETAINING WALL and ancillary works at FRESHAM MILL. Particulars and Forms of Tender, returnable by 16th JULY, 1960, obtainable from COUNTY ENGINEER, County Hall, Kingston-upon-Thames.

## COUNTY BOROUGH OF BURNLEY.

REPAVING OF FOOTPATHS AND  
SUPERELEVATION WORKS.

TENDERS are invited for REFLAGGING and KERBING WORKS in MANCHESTER ROAD and for a SUPERELEVATION SCHEME at GANNOW LANE BRIDGE.

Tender documents may be obtained from the Borough Engineer and Surveyor, 22/24 Nicholas Street, Burnley, on payment of a deposit of £2, returnable on receipt of a bona-fide Tender.

Tenders are to be returned to the undersigned not later than 9 a.m. on 11th JULY, 1960.

The Council does not bind itself to accept the lowest or any Tender.

C. V. THORNLEY,  
Town Clerk.

Town Hall,  
Burnley.

BOROUGH OF ROYAL TUNBRIDGE  
WELLS.

## MONSON ROAD BATHS.

TENDERS are invited for DEMOLITION and CONSTRUCTION WORK at the ABOVE, including the Lengthening of the Main Building, Lengthening and Deepening of the Swimming Bath, Construction of new Two-storey Front, new Boiler House, etc.

Applications for a Form of Tender and Bills of Quantities should be made to the Borough Surveyor, Town Hall, Tunbridge Wells, accompanied by a deposit of Two Guineas. The General Conditions of Contract and Drawings may be inspected at the Office.

The latest time for the receipt of Tenders will be 12 Noon on 25th JULY, 1960.

M. J. H. GIRLING,  
Town Clerk.

## CITY OF CAMBRIDGE.

CLEANSING OF PUBLIC WATERCOURSES AND  
DITCHES.

TENDERS are invited for the CLEANSING of PUBLIC WATERCOURSES and DITCHES in the City of Cambridge.

The Ditch Cleansing comprises approx. 1,300 Chains of Ditches, 700 lin. yd. of Small Culverts and 400 lin. yd. of Large Culverts, and entails the Removal of all Vegetation, Rubbish and the Annual Deposition of Silt from the Ditch Bottom and the Trimming and Clearing of the Banks up to Grass Level.

Tender documents may be obtained from the City Surveyor, Guildhall, Cambridge, on receipt of a deposit of £2 2s. (cheques to be made out to the "Cambridge City Council"), returnable on receipt of a bona-fide Tender by 3 p.m. on FRIDAY, 8th July, 1960.

ALAN H. I. SWIFT,  
Town Clerk.

Guildhall,  
Cambridge.

June, 1960.

## CITY OF LEICESTER.

## SITE CLEARANCE OF SHADY LANE P.O.W. CAMP.

TENDERS are invited from contractors experienced in similar work for the CLEARANCE of the SITE (approx. 21 acres) and REMOVAL OF FOUNDATIONS and CONCRETE FLOORINGS to 104 HILLS, followed by the GRADING of the area, CULTIVATION, SOILING and SEEDING TO GRASS.

Full details and Forms of Tender available from the undersigned on payment of £1 1s., refundable on receipt of a bona-fide Tender.

Tenders to be returned, in the official envelope, by 2.30 p.m., MONDAY, 18th July, 1960.

JOHN L. BECKETT, M.I.C.E.,  
City Surveyor.

Town Hall,  
Leicester.

SOUTHWELL RURAL DISTRICT  
COUNCIL.

## EDWINSTOWE HOUSING SITE WORKS.

The above Council invites FIXED-PRICE TENDERS from experienced contractors for the CARRYING OUT of the FOLLOWING WORKS—

- The Laying of External Soil Sewer, Soil Sewers and Surface Water Sewer.
- The Construction of Roads and Footpaths.
- The Laying of Site Water Mains.
- The Widening of Cul-de-sac off Abbey Road, Edwinstowe.

The Laying of 8in. dia. Water Main from Edwinstowe Pumping Station to Henton Road, Edwinstowe.

Together with all appurtenant works. Copies of the Specification, Bills of Quantities and Form of Tender may be obtained from Mr. K. DYSON, A.M.I.Mun.E., Engineer to the Council, Council Offices Westgate, Southwell, Notts., upon deposit of £2 2s. (by cheque made payable to Southwell Rural District Council), which will be refunded on receipt of a bona-fide Tender and the return of documents.

Drawings and the General Conditions may be inspected at the Engineer's Office during normal working hours.

Tenders, endorsed "Edwinstowe Site Works," must be delivered, in plain sealed envelopes, to the undersigned not later than 10 a.m. on MONDAY, the 11th July, 1960.

The Council does not bind itself to accept the lowest or any Tender.

S. W. LYNDIS,  
Clerk to the Council.

Council Offices,  
Westgate.

Southwell, Notts.

17th June, 1960.

## DROGHEDA HARBOUR.

## NOTICE TO DREDGING CONTRACTORS.

The DROGHEDA HARBOUR COMMISSIONERS expect to let in the future a CONTRACT for DREDGING of about 400,000 cu. yd. Trial dredging with their existing plant will be undertaken by the Commissioners this summer, the firms interested are invited to send representatives to witness the trials.

Applications to witness the trials should be made, in writing, to the Secretary, THE DROGHEDA HARBOUR COMMISSIONERS, Harbour Office, Drogheda, Co. Louth, Ireland, and should be received before the 1st JULY, 1960.

## CONTRACTS

**BOROUGH OF WATFORD.**  
EXTENSION TO PUBLIC LIBRARY.

TENDERS and PROPOSALS are invited for the FOLLOWING:-  
(1) Reinforced Concrete.  
(2) Heating and Ventilating.  
Applications for documents must be made to Mr. F. C. SAGS, Borough Engineer and Surveyor, Town Hall, Watford, not later than 2 p.m. on 4th JULY, 1960.  
The successful tenderers will be nominated sub-contractors under a fixed-price R.I.B.A. Building Contract.

GORDON H. HALL,  
Town Clerk.

**BRICKWORK SUB-CONTRACTOR WANTED**, to lay brick facing in tunnel.—For details, apply to: A. E. FARR, LTD., Portway, Clifton, Bristol, B.

For Contracts received too late for classification see page 1505

## APPOINTMENTS VACANT

**COUNTY BOROUGH OF HUDDERSFIELD.**  
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

APPLICATIONS are invited for the FOLLOWING POSITIONS:-

- (1) Senior Assistant Engineer, Grade A.P. and T.I.V £1,065 to £1,220.
- (2) Assistant Engineers, Special Grade, £785 to £1,070 (commencing salary according to experience).

Applicants should be associate members of the Institution of Civil Engineers or the Institution of Municipal Engineers. Applicants for post (1) should have experience of design and construction of reinforced concrete.

The appointments are superannuable and subject to medical examination. Canvassing is prohibited and will be considered a disqualification. Housing accommodation may be supplied to successful candidates.

Applications, giving age, experience and the names of not more than three referees, should reach A. L. Percy Esq., M.I.C.E., Borough Engineer and Surveyor, High Street Buildings, Huddersfield, not later than June 30, 1960.

HARRY BANN,  
Town Clerk.

Town Hall,  
Huddersfield,  
June, 1960.

**BOROUGH OF MIDDLETON.**

- (a) ENGINEERING ASSISTANT—A.P.T. GRADE I
- (b) ENGINEERING ASSISTANT—A.P.T. GRADE II (£765-£880 PER ANNUM).

APPLICATIONS are invited for the ABOVE APPOINTMENTS from persons possessing the necessary qualifications.

The appointments will be permanent, subject to one month's notice on either side, and to the Local Government Superannuation Acts.

Applications, stating age, qualifications, experience, and giving the names of two referees, should be delivered to the undersigned not later than Noon on MONDAY, 4th July, 1960.

F. JOHNSTON,  
Town Clerk.

Town Hall,  
Middlesfield,  
Near Manchester,  
9th June, 1960.

**MACCLESFIELD CORPORATION.**

## LAMALOAD WATER SCHEME.

## ASSISTANT ENGINEERS AND INSPECTORS.

The Corporation invites APPLICATIONS for the POSTS of ASSISTANT ENGINEERS AND INSPECTORS, who will be required to supervise, under the direction of a Resident Engineer, the construction of a concrete dam, treatment works, pipelines and service reservoirs.

The duration of the appointment is estimated to be about two years, or slightly more. Applicants for the post of Assistant Engineer should preferably be Corporate Members of the Institution of Civil Engineers.

Applicants for both posts should have had experience of similar public works.

The salary will be according to age, qualifications and experience. Travelling allowance will be payable in respect of those appointments which require travelling from one part of the work to another.

Applications are to be submitted to the Corporation's Consulting Engineers, MESSRS. HERBERT LAPWORTH PARTNERS, 25 Victoria Street, Westminster, S.W.1, on or before 4th JULY, 1960.

WALTER ISAAC,  
Town Clerk.

Town Hall,  
Macclesfield, Ches.

**CITY AND COUNTY OF NEWCASTLE UPON TYNE.**

## NEWCASTLE QUAY.

## QUAY EXTENSION—EAST OF OUSEBURN.

APPLICATIONS are invited for the FOLLOWING TEMPORARY APPOINTMENT in connection with the above works, which comprise a reinforced concrete quay, supported by reinforced concrete cylinders and reinforced concrete piles, together with associated retaining wall, steel sheet piling, anchor ties and anchor blocks. It is anticipated that the appointment will be for a period of 20-22 months.

Resident Site Engineer.—Applicants must be fully experienced in the above class of work. The salary will be in accordance with Scale "C" of the Joint Negotiating Committee for Chief Officers of Local Authorities (£1,385 x £60(3) x £55(1)—£1,620), the commencing salary to be £1,505 per annum.

Applications, stating age, and giving full particulars of qualifications and experience, together with the names and addresses of two referees, should be submitted to: L. G. MOUCHEL AND PARTNERS, Consulting Civil Engineers, 24 Claremont Place, Newcastle upon Tyne, 2, not later than THURSDAY, 23rd June, 1960.

JOHN ATKINSON,  
Town Clerk.

Town Hall,  
Newcastle upon Tyne.

## APPOINTMENTS VACANT

**BOROUGH OF SHREWSBURY.**  
WATER DEPARTMENT—APPOINTMENT OF AN ASSISTANT ENGINEER.

APPLICATIONS are invited for the ABOVE ESTABLISHED APPOINTMENT within salary A.P.T. Grade II (£765-£880), according to qualifications and experience.

Housing accommodation will be provided, if required, and removal expenses paid.

The appointment is subject to the N.I.C. Conditions of Service, the Local Government Superannuation Acts, a satisfactory medical examination, and termination by one month's notice on either side.

Applications, stating age, qualifications and details of experience, together with the names of three persons to whom reference may be made, should be submitted to the Water Engineer and Manager, Water Department, Shrewsbury, as to be received not later than the 6th JULY, 1960.

S. R. H. LOXTON,  
Town Clerk.

Guildhall,  
Shrewsbury.

**CITY OF NOTTINGHAM.**

## ASSISTANT QUANTITY SURVEYORS.

APPLICATIONS are invited for the FOLLOWING APPOINTMENT in the City Engineer's Department:

Assistant Quantity Surveyor, Grade A.P.T. III, or Special Grade, i.e., between £785 and £1,070 per annum, with annual increments. Applicants should have good professional experience, and the person appointed will be responsible for the quantity surveying work on individual contracts. Associate membership of the R.I.C.S. will be an advantage.

Commencing salary will depend on candidate's qualifications and experience.

Assistance with housing may be given.

Applications, on forms to be obtained from R. M. FINCH, O.B.E., M.I.C.E., City Engineer and Surveyor, Guildhall, should be returned to him not later than 29th JUNE, 1960.

**CITY OF LEICESTER.**

## NEW SEWAGE DISPOSAL WORKS, WANLIP.

## RESIDENT ENGINEERS.

MESSRS. J. D. AND D. M. WATSON.

## APPOINTMENT OF

## SENIOR ASSISTANT RESIDENT ENGINEER.

APPLICATIONS are invited for the ABOVE from suitable qualified persons, who should preferably be Corporate Members of the Institution of Civil Engineers and have had experience in similar work.

The duties of the post will include assisting the resident engineer and acting for him in his absence in the supervision of the construction of the new sewage works, comprising the construction of reinforced concrete sedimentation and storm water tanks, surface aeration units, final settling tanks, sludge digestion tanks, pumping stations, powerhouse, laboratory and office, and incidental works.

The salary is in the range of £1,000 to £1,250 per annum, depending upon qualifications and experience. The appointment is for the duration of the present programme of works, which is anticipated to be three years.

Housing accommodation will be made available for married officers, if required.

Applications, giving full details of age, qualifications and experience, together with the names of two referees, to be forwarded to the undersigned not later than the 1st JULY, 1960.

JOHN L. BECKETT, M.I.C.E.,  
City Surveyor.

Town Hall,  
Leicester.

**CITY OF OXFORD.**

Resident engineering staff required for Cowley centre development—roads, sewers and ancillary works.

APPLICATIONS are invited for the FOLLOWING TEMPORARY POSTS to commence early July, 1960, for a period of from two to three years:

Assistant Resident Engineer: Remuneration £1,100 to £1,350 per annum, depending on qualifications and experience. Applicants should have considerable experience of roadworks, drainage works, administration of contracts, etc.; should possess a university degree, or have passed parts I and 2 of the Institution of Civil Engineers' Examination, or equivalent.

Clerk of Works: Remuneration £800 to £1,000 per annum, depending on experience. Applicants should have not less than 10 years' site experience on civil engineering works.

Applications, stating details of training, experience, current and previous employment, should be made in writing to the City Engineer, Town Hall, Oxford, not later than MONDAY, 4th July, 1960.

HARRY PLOWMAN,  
Town Clerk.

Town Hall,  
Oxford.

**URBAN DISTRICT COUNCIL OF CRAWFORD.**

## MALE BONUS/TECHNICAL CLERK.

Salary within General Division (i.e., £455 per annum at 22 years, rising to £635), or Clerical Division, Grade I (i.e., £620, rising to £710), according to experience and qualifications. Applicants should hold a General Certificate of Education in English, Mathematics and one other subject at ordinary level, or other recognised examination, and previous experience in a similar appointment with a building firm or local authority would be an advantage, including operation of building bonus systems. Post is superannuable. Five-day week. Housing accommodation available, if necessary.

Applications, stating age, educational qualifications and experience, with names of three referees, to Engineer and Surveyor, Town Hall, Crayford, Kent, by 29th JUNE, 1960.

G. B. HODGSON,  
Clerk of the Council.

**EGHAM URBAN DISTRICT COUNCIL.**

## CLERK OF WORKS.

APPLICATIONS are invited from CLERKS OF WORKS experienced in the supervision of roadworks and construction of sewers for the ABOVE APPOINTMENT, which will be for a period of at least two years.

Salary, £15 per week.  
Forms of application may be obtained from the Engineer and Surveyor and should be returned to the undersigned not later than MONDAY, 4th July, 1960.

H. R. H. SMITH,  
Clerk of the Council.

Council Offices,  
155 High Street,  
Egham, Surrey.

## APPOINTMENTS VACANT

**GOVERNMENT OF UGANDA.**

## EXECUTIVE ENGINEER.

## PUBLIC WORKS DEPARTMENT.

Qualifications: Candidates (aged 26-45) should have either a University degree, or equivalent, recognised by the Institution of Civil Engineers, plus two years' practical experience; or have passed, or be otherwise exempt from, Parts I and II of the Final Examinations of the Institution of Civil Engineers, and have had not less than five years' approved practical experience, or be A.M.I.Mun.E.

Duties: To carry out the general duties of a qualified Civil Engineer, with emphasis on structural design work.

Terms of Appointment: On contract for one tour of 30-36 months in the first instance, with gratuity on satisfactory completion of engagement.

Emoluments in scale £1,194-£1,863 p.a. Free passages. Generous home leave. Taxation at local rates.

Apply DIRECTOR OF RECRUITMENT, Colonial Office, London, S.W.1. Give full name and age, and brief details of qualifications and experience. Quote BCD112/9/03/D14.

**CENTRAL ELECTRICITY GENERATING BOARD.**

## EASTERN DIVISION.

APPLICATIONS are invited for the FOLLOWING APPOINTMENT in the electrical department at divisional headquarters (Cockfosters, North London):

THIRD ASSISTANT ENGINEER (civil and mechanical). Salary N.J.B., Class AX/DX, Grade 6, £975 x £25-£1,100/£1,190 per annum, inclusive of London Weighting.

The successful applicant will be required to assist in the supervision of Contracts for the installation of overhead lines constructed on steel towers and for foundations and site works for transmission substations, and should have received the appropriate training for such duties.

Applications, quoting Reference S.V.1359, stating age, qualifications, experience and present position, should be sent to the Controller, CENTRAL ELECTRICITY GENERATING BOARD, Eastern Division, West Farm Place, Chalk Lane, Cockfosters, Barnet, Herts., to arrive not later than 2nd JULY, 1960.

**COUNTY BOROUGH OF EAST HAM.**

## ENGINEERING ASSISTANTS, A.P.T. I. Salary up to £795 per annum.

Subsistence allowances may be granted over a reasonable period to the persons appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and application forms returnable by 8th JULY, 1960, from the TOWN CLERK, Town Hall, East Ham, E.6.

**COUNTY BOROUGH OF EAST HAM.**

## SENIOR ASSISTANT ENGINEER (General). Grade III, £880-£1,065.

London Weighting is paid in addition. Salary in excess of the minimum may be paid, according to qualifications and experience.

A subsistence allowance may be granted over a reasonable period to the person appointed if unable to obtain suitable housing accommodation, necessitating the maintenance of two homes.

Further details and application forms returnable by 8th JULY, 1960, from the TOWN CLERK, Town Hall, East Ham, E.6.

**COUNTY BOROUGH OF SUNDERLAND.**

## PUBLIC WORKS DEPARTMENT.

## SENIOR MEASURING AND BONUS SURVEYOR, GRADE A.P.T. II (£765-£880).

APPLICATIONS are invited from suitable persons who are experienced in SITE MEASURING of building and civil engineering new and maintenance work. Some experience of negotiating and running incentive bonus schemes would be an advantage.

The post is permanent and superannuable. Further particulars and Form of Application may be obtained on application to the Public Works Manager, Ivor House, 1 and 3 Otto Terrace, Sunderland.

Applications, suitably endorsed, to be addressed to the undersigned at the Town Hall, Sunderland, so as to reach me not later than MONDAY, 18th July, 1960. Canvassing will disqualify.

G. S. MCINTIRE,  
Town Clerk.

Town Hall,  
Sunderland.

**COUNTY BOROUGH OF WEST HAM.**

BONUS MEASURING ASSISTANT REQUIRED. Must be experienced in measuring building works in all trades for incentive bonus. Salary Miscellaneous Grade V, £650 to £715 per annum, plus London allowance of £25-£40 per annum, according to age.

Applications, in writing, giving full particulars of experience, age, etc., to BOROUGH ENGINEER AND SURVEYOR, West Ham Town Hall, Stratford, E.15, by 2nd JULY, 1960.

**BOROUGH OF WIDNES.**

## ENGINEER AND SURVEYOR'S DEPARTMENT.

GENERAL FOREMAN REQUIRED in the Building Section, with a sound knowledge of modern building techniques (including bonus incentive schemes). Experienced in house and flat construction, and able to supervise contracts up to 150 dwellings, and work to a programme.

Wages £19 1s. for 47-hour week. Pension and sick pay scheme.

Particulars of age, experience and qualifications to BUILDING SUPERINTENDENT, Building Department, Milton Road, Widnes.

**CRAVEN WATER BOARD.**

## THIRD TECHNICAL ASSISTANT SPECIAL GRADE.

APPLICATIONS are invited from persons with experience in public water supply who have completed their professional training and who have passed parts I and II of the Institution of Civil Engineers' Examination, or who hold a degree exempting therefrom. Commencing salary range, £785 to £1,070 per annum in seven steps. Usual conditions apply. Any request for tenancy of a Council house would be considered on its merits by constituent authorities of the Board. Canvassing disqualifies. Application forms from the undersigned must be returned by 13th JULY, 1960.

G. E. V. BOLDYR, ESQ.,  
M.I.C.E., M.I.W.E.,  
Engineer Manager.

Craven Water Board,  
Belmont Bridge,  
Skipton,  
15th June, 1960.

## APPOINTMENTS VACANT

GLOUCESTERSHIRE COUNTY COUNCIL.  
COUNTY SURVEYOR'S DEPARTMENT.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS:

- (a) Assistant Engineer in the Career Class. Through grading (subject to satisfactory service). A.P.T. IV-V (£1,065-£1,375 per annum). Associate Membership of the Institution of Civil Engineers or equal qualification essential. Car allowance up to 12 h.p.
- (b) Assistant Engineer in the Qualifying Class for planning liaison work. Through grading (subject to satisfactory service). A.P.T. I. Special (£610-£1,070 per annum). Qualifications not essential. Car allowance up to 10 h.p.

All applicants should hold a current driving licence, and commencing salary will be in accordance with qualifications and experience.

Application forms obtainable from, and to be returned to the County Surveyor, Quay Street, Gloucester, not later than 12 Noon on the 11th JULY, 1960.

GUY H. DAVIS,  
Clerk of the County Council.

Shire Hall,  
Gloucester.  
14th June, 1960.

## CITY BOROUGH OF NEWPORT.

APPLICATIONS are invited for the FOLLOWING APPOINTMENTS in the Borough Engineer's Department:

- (a) TWO SENIOR ASSISTANT ENGINEERS. Grade A.P.T. IV (£1,065-£1,220).
- (b) ENGINEERING ASSISTANT (Special Grade) (£785-£1,070).

Applicants for the posts referred to in (a) must be chartered civil or municipal engineers, and (b) graduate of the Institution of Civil Engineers, or hold the Testamur of the Institution of Municipal Engineers or an Engineering Degree. The commencing salary for each appointment will be at any point within the appropriate grades, and will depend upon experience. Housing accommodation will be provided if, in the opinion of the Council, it is necessary.

Applications, with copies of two recent testimonials, should reach the BOROUGH ENGINEER, Civic Centre, Newport, Mon., by the 12th JULY, 1960.

## BOROUGH OF HARROW.

VACANCIES exist for QUANTITY SURVEYING ASSISTANTS in the Department of the Borough Engineer and Surveyor.

Salary £765 per annum, plus London "Weighting" (maximum of A.P.T. Grade I), or £880 per annum, plus London "Weighting" (maximum of A.P.T. Grade II), according to qualifications and experience. The Council is prepared to provide housing accommodation, but contributions towards removal expenses will be considered.

The appointments will be subject to the Local Government Superannuation Acts; and to the National Joint Council's Scheme of Conditions of Service.

Application forms are obtainable from me, to whom they should be returned not later than SATURDAY, 9th July, 1960.

D. H. PRITCHARD,  
Town Clerk.

Harrow World Lodge,  
92 Uxbridge Road,  
Harrow, Middx.

## CITY AND COUNTY OF BRISTOL.

CITY ENGINEER AND PLANNING OFFICER'S  
DEPARTMENT.

## APPOINTMENT OF SURVEYING ASSISTANT.

A vacancy exists in City Engineer and Planning Officer's Department for SURVEYING ASSISTANT. Salary Grade A.P.T. I (£610-£765 per annum). Candidates should have had experience in carrying out large surveys. Experience of ordinance survey work an advantage.

Post pensionable medical examination. Applications, stating age, nationality, educational training, professional qualifications, present and previous positions, with salaries and dates, notice required to terminate present appointment, whether related to member or senior officer of the Council, and names of two referees, to CITY ENGINEER AND PLANNING OFFICER, Cabot House, Deansry Road, Bristol, 1, by 6th JULY.

Canvassing disqualified.

## WEST WILTS. WATER BOARD.

## AMENDED ADVERTISEMENT.

- APPOINTMENT OF  
(1) ASSISTANT CIVIL ENGINEER, Grade IV (£1,065-£1,220).
- (2) DRAUGHTSMAN, Miscellaneous Grades V and VI (£650-£775).

APPLICATIONS are invited for the ABOVE APPOINTMENTS. For post (1) applicants should be graduates or associate members of the Institution of Civil Engineers. Experience in water engineering and/or reinforced concrete design will be an advantage. For post (2) experience in a water undertaking will be an advantage.

The successful applicants will be able to obtain varied experience in the design and construction of extensive capital works about to be commenced by this new Board.

Both posts are superannuable and subject to Charter Conditions. A five-day week is provided. For post (1) assistance towards housing accommodation and/or a subsistence allowance may be given, subject to certain conditions.

For both posts one half of removal expenses will be paid in approved cases.

Applications, stating age, status, qualifications, present salary, with full details of experience and the names and addresses of two referees, to be received by the undersigned not later than TUESDAY, 5th July, 1960.

J. A. YOUNG,  
Engineer and Manager.

55 Boreham Road,  
Warminster, Wilts.

## THAMES VALLEY WATER BOARD.

APPLICATIONS are invited for the APPOINTMENT of an ENGINEERING ASSISTANT at a salary within the Special Grade for Engineering and Surveying Assistants, i.e., £785-£1,070 per annum.

Applicants should be chartered civil engineers with some years of experience of water supply engineering. Appointment subject to the National Scheme of Conditions of Service, the provisions of the Local Government Superannuation Acts, 1937-1953, and the passing of a medical examination.

Applications, stating age, qualifications and experience, together with names and addresses of two referees, should reach the undersigned by the 6th JULY, 1960.

G. F. DARLOW,  
Clerk to the Board.

Town Hall,  
Reading.

## APPOINTMENTS VACANT

## BRITISH TRANSPORT WATERWAYS.

CLERK OF WORKS (temporary) REQUIRED for supervision of contract for the construction of new locks and other works on the River Lee Navigation and at Regents Canal Dock, Stepney. Must have experience in supervising large civil engineering contracts. Experience in mass concrete and steel sheet piling desirable.

Salary £900 to £1,000. Certain railway privilege travel facilities. Apply in writing, giving full particulars, to DIVISIONAL STAFF ASSISTANT, British Waterways, Willow Grange, Church Road, Watford, Herts, not later than 11th JULY, 1960.

SENIOR QUANTITY SURVEYOR REQUIRED for employment with Cumberland builders. Experience of final accounts and estimates. House available. Write, giving full details of experience, final qualifications, and state salary required, to Box V.1715, "The Contract Journal."

MOWLEM PAVING CO., LTD., REQUIRE additional SUPERVISORS for asphalt surfacing contracts. Duties will be to control and organise the work of road gangs operating in the London area. Experienced and practical men are invited to apply in writing, with details of training, previous positions, age, etc., to 19 Grosvenor Place, S.W.1. A good salary commensurate with experience is envisaged, and a car is provided, or allowance paid. A pension scheme operates after probationary period. All replies treated as confidential.

MALE ACCOUNTS CLERK REQUIRED by civil engineering contractors, Victoria area. Previous experience in estimating, accounts, and clerical work an advantage. Excellent prospects for the right applicant. Pension scheme in operation. Write stating age, education, experience and salary required, to Box V.2130, "The Contract Journal."

A. MONK AND COMPANY, LTD., Civil Engineering and Building Contractors, Padgate, Warrington. DESIGN ENGINEERS REQUIRED for head office design department. Applicants should have experience in reinforced concrete design. General civil engineering design experience, e.g., formwork, cofferdams and temporary works would be advantageous but is not essential, as suitable applicants will be able to gain experience in these spheres. Opportunities for visiting sites. Investigation of foundation problems and carrying out laboratory tests on concrete and soils. Permanent and progressive posts with superannuation scheme. Apply Personnel Manager at the above address.

THE 143 PLANT REGT. ROYAL ENGINEERS (TA), with Squadrons at Walsall, Brierley Hill and Titchfield (Hants.), has vacancy for one or more JUNIOR TA OFFICERS with qualifications in civil engineering or engineer plant. Applicants with or without previous service considered. Apply Adjutant, TA Centre, Gordon House, Sutton Road, Walsall, Tel.: Walsall 5644.

CIVIL ENGINEERING contractors expanding their organisation wish to appoint a SENIOR SITE ENGINEER for roadworks and main drainage contracts in the Oxfordshire area. Salary range of £1,000-£1,200 p.a. Permanent and progressive post, with superannuation scheme. Write in confidence, stating age, full details of experience and past employers, etc., to Box V.2138, "The Contract Journal."

SITE ENGINEER REQUIRED on major roadworks in Surrey. Permanent position for keen person, who must have had three years' site experience in levelling and measuring. Write Box V.2137, "The Contract Journal."

BRIDGE FOREMAN AND SHUTTERING CARPENTERS REQUIRED immediately for motorway contract at Stevenage. Apply Site Agent, MARTIN COWLEY, LTD., Gipsy Lane, Knebworth, Herts.

RESIDENT ENGINEER for reconstruction of the swing bridge at Caernarvon. Approx. 9/12 months' appointment, commencing July/August, 1960. Experience of welding and main drainage contracts plus expenses allowance. Applications, giving full details of experience, should be forwarded to the Consulting Engineers, R. BULLEN AND PARTNERS, Dacre House, Dean Farrar Street, London, S.W.1.

## CIVIL ENGINEER

Under 30, qualified A.M.I.C.E., REQUIRED for permanent staff by old-established firm of civil engineering contractors specialising in piling. Write, giving brief particulars of qualifications and experience, to:

The Managing Director,  
JOHN GILL CONTRACTORS, LTD.,  
123 Pall Mall, London, S.W.1.

MANAGER REQUIRED for an expanding ready-mixed concrete firm. Must be experienced in estimating, mix design, labour and production control. Good prospects. Write, stating age, experience, and salary required, to Box V.2071, "The Contract Journal."

EXPANDING civil engineering contractors REQUIRE the following staff immediately: AGENTS, SUB-AGENTS, SENIOR AND JUNIOR ENGINEERS, GENERAL FOREMEN, COST CLERKS, TIMEKEEPERS. All posts are permanent and pensionable. Write Box V.2110, "The Contract Journal."

ROADSTONE REPRESENTATIVE REQUIRED for Midlands area. Apply in writing, stating age, experience, and salary required, to WILLIAM PRESTWICH AND SONS, LTD., Dronfield, near Sheffield.

SURVEYOR/ESTIMATOR or ENGINEER with sound knowledge of costing and measurements. REQUIRED by large firm of building and civil engineering contractors for their head office, Ibadan, Nigeria. Age preferred: over 30. £1,000-£2,000 per annum, according to experience. Free furnished quarters and transport provided. Family passages paid. 24 months' tour with three months' paid leave. Please apply to Personnel Officer, T. A. ONI AND SONS, LTD., P.O. Box 242, Ibadan, Nigeria.

SITE ENGINEER REQUIRED by civil engineering contractors for pipe laying and sewerage contracts in Yorkshire and Lancashire. Good salary and conditions with permanent position for man of good practical experience. Write to Box V.2134, "The Contract Journal."

CHIEF SURVEYOR REQUIRED by progressive modern building contractors, capable of assuming responsibility and control of surveying department. Four-figure salary and pension scheme available to suitable applicant. MORTON POTTER, LTD., Barkby Road, Leicester.

ASSISTANT CIVIL ENGINEER REQUIRED for sewerage works reconstruction in the North of England. Permanent position for suitably qualified engineer. Write stating experience, age and salary required, to Box V.2135, "The Contract Journal."

## APPOINTMENTS VACANT

SIMON-CARVES, LTD.—Building and Civil Engineering Department.—SUB-AGENT. Civil Engineer REQUIRED of Sub-Agent standard for training as Agent. Qualifications: B.Sc., H.N.C., A.M.I.C.E., or equivalent. Applications from men with wide site experience without those qualifications will be considered. A minimum of three years' site experience with reputable contractor is essential, covering one or more of the following: Prestressed and reinforced concrete; heavy excavation; cofferdams; temporary works; concrete mix design; dewatering; piling; formwork. Applications, stating age, qualifications, experience, quoting Ref. SC53, to Contract Labour Dept., Simon-Carves, Ltd., Cheadle Heath, Stockport, Chas.

AGENT GENERAL FOREMAN REQUIRED for civil engineering contracts up to £100,000. Must be experienced in roads, sewers and reinforced concrete construction, capable of working with minimum supervision. Apply in writing, giving details of past experience, and salary required, to H. C. JAMES, LTD., 183 High Town Road, Luton.

JUNIOR ENGINEERS REQUIRED for setting out and general site duties in London and the south of England. Ample opportunities for advancement in established national company. Apply: WILSON LOVATT AND SONS, LTD., 16 Grosvenor Crescent, London, S.W.1. Tel: Belgravia 2141.

ENGINEER AGENT REQUIRED. East Yorks first year, age 28 to 40. Experienced piling, foundation, and estimating works. Good prospects with old-established firm now expanding. Usual allowances, superannuation. GENERAL FOREMAN also REQUIRED. Write Box V.2114, "The Contract Journal."

ENGINEER/AGENT for road and sewer construction REQUIRED in Oxford area. Only men fully experienced in dealing with difficult ground conditions need apply. Permanent position with expanding firm. Write, stating full particulars of experience and salary required, to Box V.2115, "The Contract Journal."

## MEDIUM-SIZED COMPANY

Of civil engineering contractors require the following staff:—

## SITE ENGINEERS

With not less than 2½ years' experience embracing setting out and concrete construction. Knowledge of shuttering design would be an advantage.

## GENERAL FOREMEN

With background experience of piling and bridge works construction.

## SECTION FOREMEN

Preferably with time served as carpenters on works of civil engineering construction.

## COST AND CLERK

Permanency is assured, together with excellent salaries and superannuation benefit to those possessing initiative and drive. Write Reference 1960/23.

## LOMOUNT CONSTRUCTION, LTD.

Sackville House, 40 Piccadilly, London, W.1.

CIVIL ENGINEER (Junior) REQUIRED by North office. Applicants should preferably be qualified and possess up to three years' site experience. This is an excellent opportunity for an enthusiastic young engineer to join a rapidly expanding organisation. Applications should be submitted to Mr. K. Lowery, DAVIS CONTRACTORS, LTD., 346-50 Kilburn High Road, N.W.6.

SITE ENGINEER REQUIRED by London firm of civil engineering contractors. Good prospects for keen young man who is experienced and accurate in setting-out. Superannuation scheme in operation. Write full details of training, experience, and salary grade, to Box V.2108, "The Contract Journal."

ESTIMATOR REQUIRED for London head office of engineering contractors, to assist in the preparation of tenders. Applicants, preferably qualified, should have experience in building up rate and the preparation of work programmes. Site experience with contractors would be an advantage. Write, giving summary of qualifications and experience, to Box V.2107, "The Contract Journal."

CIVIL ENGINEERS.—ASSISTANT SITE ENGINEERS REQUIRED by C. BRYANT AND SON, LTD., for progressive positions leading to Engineer-Agent posts. Apply stating age, experience, and salary required, to J. E. Guest, A.M.I.C.E., Head Office, Whitmore Road, Small Heath, Birmingham, 10.

TWO SITE ENGINEERS REQUIRED immediately for sewerage contracts. Opportunities for advancement to Site Agents to applicants of proved experience and ability. Salary £750 and £1,000 per annum according to experience. Write, stating age, qualifications and experience, to A. BRETT (CONTRACTORS), LTD., Grimsburgh, near Preston.

GENERAL FOREMAN REQUIRED to supervise works of main drainage, comprising large concrete pipes. Write, stating age and experience, to A. BRETT (CONTRACTORS), LTD., Grimsburgh, near Preston.

GENERAL FOREMAN REQUIRED to supervise the laying of large water mains. Apply, stating age and experience, to A. BRETT (CONTRACTORS), LTD., Grimsburgh, near Preston.

QUARRY MANAGER REQUIRED for granite quarry in North Wales. Experienced in quarry plant and bituminous macadam production. Apply H. J. ENSTON, Plas Merion, Gower Road, Trefriw, Caerns.

BUILDER'S GENERAL FOREMAN for controlling several medium-sized contracts in Blackpool and district. Must be capable of producing at economic rates, have knowledge of specifications and quantities, and be able to set-out and level. Age approx. 32-40. Apply in confidence, stating age, present position and salary, also technical qualifications, if any, to F. PARKINSON, LTD., Mowbray Drive, Blackpool.

STRUCTURAL ENGINEERS.—Vacancies exist for STRUCTURAL DESIGNERS AND DETAILERS. Positions are available which offer excellent prospects and opportunity for permanency. Pension scheme. Apply in confidence, giving full details of education, training, qualifications and experience, with an indication of salary required, to Personnel Officer, ROBERT M. DOUGLAS (CONTRACTORS), LTD., 395 George Road, Erdington, Birmingham, 23.

FULLY qualified MECHANICAL ENGINEER REQUIRED by company engaged in the distribution and sale of crawler tractor spare parts. The successful applicant must be fully conversant with all aspects of earthmoving equipment generally, and tractor undercarriage components particularly. He will be required to travel extensively overseas. The post is a permanent and progressive one and offers excellent prospects to the right man. Transport available when in U.K. All applications will be treated with the strictest confidence. Only men with the right background need apply, and they are invited to write, stating age, qualifications, experience, and salary required, to Box V.2116, "The Contract Journal."

## APPOINTMENTS VACANT

**ASSISTANT ENGINEER** REQUIRED by major civil engineering and building contractors operating on a national scale on nuclear, steam and hydro-electric projects. This permanent appointment is initially for a major civil engineering contract, with excellent opportunities for advancement. Good salary and conditions, and entry into superannuation scheme after 12 months' service.—Apply to: **THE MITCHELL CONSTRUCTION CO., LTD.**, Wharf Works, Peterborough.

**CASHIER/STOREKEEPER** REQUIRED by civil engineering contractors, for large highway contract in East Africa. Previous experience essential. 18 months' tour. Excellent pay and leave. Free accommodation.—Phone: Sloane 0781, or write to Box V.2126, "The Contract Journal," quoting Ref. QRS/17.

**SITE ENGINEERS** REQUIRED for contracts in Home Counties and West Midlands. Must be fully experienced in setting out, measuring and compiling interim certificates. Good opportunities for the right men, and contributory pension scheme.—Write to: **HADSPHALLTIC CONSTRUCTION CO., LTD.**, Johnston House, Hatchlands Road, Redhill, Surrey.

## PLANT HIRE MANAGER

Due to reorganisation and expansion, a vacancy now exists for a **PLANT HIRE MANAGER** for our new offices in Ealing. Applicants must be fully experienced in plant hire, and preference will be given to those who have held similar position. Good salary offered to right man, full experience, writing, stating experience, age, salary required.—All applications will be treated in the strictest confidence, and should be addressed to:

The Chairman,

**ARUP AND ARUP, LTD.**, Colquhoun House, Broadwick Street, London, W.1.

**AGENT**—Rapidly expanding firm of public works contractors **REQUIRES CONTRACTS AGENT** for Sheffield area. Applicants must have at least five years' experience in road and sewer contracts, and preferably with some knowledge of tendering.—Applications, stating present employer, salary, etc., in strict confidence, to Box V.2118, "The Contract Journal."

**OLD-ESTABLISHED** Midlands civil engineering contractors invite applications from experienced practical men for the position of **SENIOR CONTRACTS or GENERAL MANAGER**. The position is permanent and with prospects.—Write Box V.1113, "The Contract Journal."

**SENIOR AGENT/ENGINEER** REQUIRED by civil engineering contractors for several medium-sized main drainage and roadwork contracts. A salary range of £1,300-£1,500 p.a. will be offered to applicant of proven ability, possessing initiative and drive. Permanent and progressive post, with superannuation scheme in operation.—Write, in confidence, stating age, full details of experience and past employers, etc., to Box V.2127, "The Contract Journal."

## SIR ALFRED McALPINE AND SON, LTD.

Urgently **REQUIRE** experienced **CIVIL ENGINEERS** for contracts in South Lancs. and Cheshire. Good prospects and salary.—Write, in confidence, stating age, experience and salary required, to:

**SIR ALFRED McALPINE AND SON, LTD.**, Hooton, Wirral, Cheshire.

**STRUCTURAL ENGINEER or STRUCTURAL ENGINEERING DRAWING MAN** REQUIRED for progressive position in rapidly expanding structural steel company. Applicants must be able to carry out own design work, calculations, etc. A free hand and car will be supplied. Applicants must be prepared after trial period to live in Yorkshire. A good position for an enthusiastic and conscientious man.—Write, giving details of experience, and salary required, to Box 4174, William Staff, Advertisement Offices, Bradford. All replies will be treated in strictest confidence.

**F.Y. ASH, CIVIL ENGINEER**—STEPHENSON CLARKE (P.F. ASH DEVELOPMENT), LTD., a Powell Duffryn company, have a vacancy in Manchester or London for a young **ASSISTANT CIVIL ENGINEER** with enthusiasm and initiative. Previous knowledge or experience of fly ash uses unnecessary, but candidate should be prepared to adapt himself technically for this interesting, progressive and superannuable post.—Write full particulars with copies references, in strict confidence, to Box V.2123, "The Contract Journal."

**CONTRACTS MANAGER** (Civil Engineering) **REQUIRED** for medium-sized contracts in Birmingham area. Permanent position with good salary offered to suitable applicant. All replies treated in strictest confidence.—Send full particulars of experience, etc., to Box V.2109, "The Contract Journal."

## PIPELINES

All types are an ever-increasing requirement. To meet this continued expansion of their activities, **WILLIAM PRESS AND SON** seek a **SENIOR MAINTAINING ESTIMATOR**. This is a permanent appointment for a man having proved ability in the preparation of tenders for large-diameter water, gas and oil pipelines, using the most modern methods and equipment. It will carry a salary in accordance with this experience and ability. The company operates a bonus scheme and also a pension scheme with life insurance benefits.—Write full details of personal history, in confidence, to:

The Chief Estimator,

**WILLIAM PRESS AND SON, LTD.**, Willoughby Lane, Tottenham, London, N.17.

**A LARGE** civil engineering and building company **REQUIRES** the following staff for a major project in the South of England: **ASSISTANT RESIDENT ENGINEERS, CLERKS OF WORKS, INSPECTORS, GENERAL CLERICAL STAFF, WAGES CLERKS, TIMEKEEPERS/CHECKERS**. This is an excellent opportunity to join a progressive company with good conditions of employment and offering prospects of advancement.—Write full details of personal history, to Box V.2122, "The Contract Journal."

**DOWSETT ENGINEERING CONSTRUCTION, LTD.**, **REQUIRE** the following senior staff: **PIPELINE MANAGER** to be responsible to the Board for all pipeline contracts in Great Britain; **SITE AGENTS** for large-diameter steel and prestressed concrete pipeline contracts. Excellent prospects in an expanding company.—Written applications, giving full details, should be addressed to: **Managing Director, Dowsett Engineering Construction, Ltd.**, Dowsett House, Durham Road, Gateshead-upon-Tyne, 9.

## APPOINTMENTS VACANT

**T.H. CONTRACTORS, LTD.**, **REQUIRE SECTION ENGINEERS and SITE ENGINEERS** for contracts throughout south and south-west England. Good prospects. Superannuation scheme after probationary period. Apply, writing, stating age, experience, previous employers, etc., to: **T.H. CONTRACTORS, LTD.**, 300 Chiswick High Road, London, W.4.

**SIMON-CARVES, LTD.**—Building and Civil Engineering Department.—**CONTRACTS MANAGEMENT.** A Civil Engineer is **REQUIRED** to be responsible for the management of a group of contracts each controlled by a Site Agent. Duties cover planning, organisation and running of these contracts from inquiry to completion, and will be carried out from a fixed base. Previous experience in a similar capacity is desirable, but applications from men with successful experience as Agent will be considered. Degree or A.M.I.C.E. an advantage. Generous salary; company car; pension scheme. Details of age, qualifications, previous employers, and positions held should accompany applications. References will not be taken up without permission.—Reply, quoting Ref. C59, to Contract Labour Dept., Simon-Carves, Ltd., Cheadle Heath, Stockport, Ches.

**BRITISH CELLOPHANE, LTD.**, **REQUIRE** a fully qualified **CIVIL ENGINEER** to assist in promoting the sales of plastic films in building and civil engineering work. He should preferably have had experience in large contracts involving roadmaking and building establishments. He will work in the civil engineering section of Plastic Films Division in London, W.1, and will be expected to take charge of that section in a few years' time when the existing head retires. Occasional overseas travel would probably be involved. Interviews will take place in London. Apply to the Personnel Officer, British Cellophane, Ltd., Bridgewater, Somerset.

## PLANT SALES MANAGER

Applications are invited for the position of **PLANT SALES MANAGER** with a leading London plant hire company. Successful applicant would be required to commence and build up a sales department, and should, therefore, have considerable experience in plant sales. Write, giving full details of experience and salary required.—All applications will be treated in the strictest confidence, and should be addressed to:

The Chairman,

**ARUP AND ARUP, LTD.**, Colquhoun House, Broadwick Street, London, W.1.

**AGENTS REQUIRED** for Post Office contracts in London and the surrounding counties. High salary offered to suitable applicants, who must be fully conversant with this type of work.—Apply, in writing, to: **STANLEY RAYMOND AND CO., LTD.**, Sussex Road, Southall.

**ESTIMATOR**—**SIMON-CARVES, LTD.**, specialising in the design and construction of heavy industrial plant, **REQUIRE** for their building and civil engineering department an additional **ESTIMATOR**. The work in the estimating section has increased considerably, and a senior man is needed to assist with tenders for a variety of work such as water treatment plants, sewage schemes, schools, and other local authority projects, reinforced concrete silos and bunkers, industrial buildings and structures. Applicants must have previous experience of estimating for civil engineering contracts. The position, which is permanent and pensionable, offers a generous salary, which will be subject to a yearly merit review.—Send brief relevant details to Staff and Training Division, Simon-Carves, Ltd., Cheadle Heath, Stockport, Cheshire, quoting Ref. WP68.

**CIVIL ENGINEERS** REQUIRED by expanding civil engineering contractors, for work in the London area: **CONTRACTS ENGINEERS**—duties involving placing of sub-contracts, negotiation with clients and supervision of some mechanical work. This position is an advantage. Starting salary £1,000-£1,200; **SITE AGENTS**—for work on construction of offices and factory buildings. Starting salary £1,200-£1,500; **ASSISTANT PROJECT ENGINEERS**—for planning and project work on large major civil engineering contracts. Starting salary £850-£1,000.—Applicants should be, preferably, under 35 years of age, and should write full details of experience to Box V.2179, "The Contract Journal."

## CUBITTS

Civil engineering construction.—**SENIOR CIVIL ENGINEER** REQUIRED for planning and development work in connection with projects and contracts at home and overseas, including joint ventures. Applicants should have spent not less than five recent years on civil engineering construction, preferably with contractors, and have specialised knowledge of construction planning and plant, and design of temporary works, together with some costing and estimating experience. Preference for applicants with a good working knowledge of one or more European languages. This appointment offers a wide variety of interesting work and contracts, and the opportunity for a progressive career in an expanding international contracting organisation.—Full details of qualifications and experience, in strict confidence, to:

Personnel Manager (CJ/5493),

**HOLLAND & HANNEN and CUBITTS, LTD.**, 1 Queen Anne's Gate, London, S.W.1.

**SALES REPRESENTATIVE**—**FRED. MYERS, LTD.**, invite applications for a **SALES REPRESENTATIVE** for the sale of used Caterpillar tractors and earthmoving equipment, both overseas and throughout the U.K. This is an excellent opportunity for a man with potential managerial ability to build up this ever-increasing side of the company's business.—Please reply in confidence to Sales Manager, Earthmoving Equipment Division, **FRED. MYERS, LTD.**, 24 Bruton Street, London, W.1.

**WANTED** urgently by £12m. Ideal Building Group—**QUANTITY SURVEYORS and MEASURING SURVEYORS** for **NEW IDEAL HOMESTEADS, LTD.**, a member company of the Ideal Building Group, **REQUIRE** Surveyors for their expansion programme. Permanent, pensionable appointments with exceptional prospects are offered to keen and enthusiastic Surveyors of the highest quality.—Written applications, please, with all relevant details, to Personnel Manager, Carlton House, Epsom, Surrey. Appointments arranged in London if desired.

**DUNLOP RUBBER CO.**, Semtex Division, **REQUIRE** **TWO REPRESENTATIVES** to be based respectively upon Guildford and Maidstone. Candidates must possess a thorough knowledge of flooring and have had an outside sales experience. A good basic salary, commission, superannuation, expenses and car provided.—Apply with full particulars to Personnel Manager, Semtex House, Berners Street, London, W.1.

## APPOINTMENTS VACANT

**A WELL-KNOWN** national company is desirous of interviewing applicants for a **POST** in their built-up roofing department, based in Manchester area. The position offers scope and advancement to the successful applicant, who should be approximately 25 years of age, of good personality and educational background. A period of training will be provided in London, and previous experience in the building industry an advantage.—Write full details, in confidence, to Area Manager, Box V.2120, "The Contract Journal."

**FRED MYERS, LTD.**, Maidenhead Road, Windsor, Berks., have a vacancy in the west of England and South Wales for an **AREA MANAGER**, selling to the trade imported John Deere-Lanz industrial agricultural tractors and equipment. Excellent basic salary, commission, car and expenses.—Apply in writing to the Sales Manager, Agricultural Division, at the above address.

**AGENT** REQUIRED by major civil engineering and building contractors operating on a national scale of nuclear, steam and hydro-electric projects. This permanent appointment is initially for a major civil engineering contract with excellent opportunities for advancement; good salary and conditions and entry into superannuation scheme after 12 months' service.—Write Box V.2131, "The Contract Journal."

**JUNIOR ENGINEER** REQUIRED by building and civil engineering contractors.—Please write, giving full particulars of experience, salary required, etc., to: **PLANT ENGINEERING CONTRACTORS, LTD.**, 125 Queen Street, Whitehaven.

**BUILDERS' CLERK** REQUIRED by large firm in N.W. London. Permanent position for right applicant. Pension scheme.—Write full details of experience, age, salary required, to Box V.2129, "The Contract Journal."

**GEE, WALKER AND SLATER, LTD.**, **REQUIRE** **GENERAL FOREMAN** for extension to Doncaster Royal Infirmary starting in approx. two weeks' time. Applications, in writing, stating salary required, should be addressed to Uttoxeter Old Road, Derby.

## SCOTTISH SPECIAL HOUSING ASSOCIATION, LTD.

**CIVIL ENGINEER** (preferably 25-30 years) to act as **ASSISTANT PRODUCTION ENGINEER** for a direct labour organisation undertaking extensive multi-storey flat and other house engineering work. Site experience on building and civil engineering jobs essential, and experience of operational planning and/or work study methods would be an advantage. Post superannuable under Local Government Superannuation Acts. Salary scale £780-£1,135, with place for experience. Applications, stating age, qualifications and experience, to:

The Secretary,

**SCOTTISH SPECIAL HOUSING ASSOCIATION, LTD.**, 19 Palmerston Place, Edinburgh, 12.

**PLANT ENGINEER**—Young Executive with progressive outlook **REQUIRED** for expanding plant department of national building and civil engineering contractors. Applicants, aged 30-40, must have good educational background and sound practical experience of plant planning and supervision. Salary awarded according to ability and qualifications.—Write in confidence, giving full details of previous appointments held, to Chief Mechanical Engineer, Box V.2147, "The Contract Journal."

**DEPUTY BUYER/PROGRESS CONTROLLER** **REQUIRED** by purchasing department at headquarters of nationally operating civil engineering and building company. Applicants should be H.N.C. standard and possess commercial acumen, considerable experience in technical buying, taking-off quantities, knowledge of markets, competitive buying, etc. Pension and life insurance scheme in operation.—Apply, stating age, experience and salary required, to: **ROBERT M. DOUGLAS (CONTRACTORS), LTD.**, 395 George Road, Erdington, Birmingham, 23.

**CIVIL ENGINEERING INSPECTOR** **REQUIRED** for work on the construction of nuclear power stations in this country and abroad. Applicants, who must be well qualified, should write stating age, qualifications and experience to The Administrative Assistant, Group Resident Superintendent's Department, Hinkley Point, near Bridgwater, Somerset.

## COSTING AND INCENTIVE SURVEYORS

**H. FAIRWEATHER AND CO., LTD.**, have vacancies for **SENIOR and ASSISTANT COSTING SURVEYORS**. Experience is required in the application of all types of incentive schemes allied to contract planning and method study. Excellent prospects for advancement with permanent pensionable positions.—Write, in confidence, stating age, qualifications, salary required, to:

Personnel Manager,

**H. FAIRWEATHER AND CO., LTD.**, Hyde Works, St. James's Lane, London, N.10.

**GENERAL FOREMAN** **REQUIRED**. Applications are invited from first-class men.—Write, giving full details of past experience, and salary, etc., to Ref. R.J.W., **PERCY BILTON, LTD.**, Bilton House, Ealing, W.5.

**GEE, WALKER AND SLATER, LTD.**, **REQUIRE** **FOREMAN BRICKLAYER and FOREMAN CARPENTER** for extension to Doncaster Royal Infirmary, starting in approx. two weeks' time. Applications, in writing, stating salary required, should be addressed to Uttoxeter Old Road, Derby.

**FOUR CIVIL ENGINEERS**, 24-30 years of age, **REQUIRED** for contract in Worcester, required for the construction of six concrete bridges. Good salary, bonus and pension schemes.—Telephone: Regent 2112, or write Contracts Director, **LOMOUNT CONSTRUCTION, LTD.**, 45 Piccadilly, London, W.1.

**BUILDING AREA MANAGER** **REQUIRED** by national company to supervise building contracts in the North of England. Applicants must have had considerable experience in the building industry and should be over 30 years of age. The post carries a substantial salary and bonus. Applications, which will be treated in confidence, should be in writing, giving full details of age, experience, etc., to Box V.2117, "The Contract Journal."

**SIMON-CARVES, LTD.**, invite **APPLICATIONS** from men experienced in designing timber or other types of formwork, for vacancies in the formwork and temporary works design section of their building and civil engineering department. These posts are permanent and pensionable, with prospects of promotion with expansion of work. Salaries up to £1,000 per annum, according to ability and experience. Send brief relevant details to Staff and Training Division, **SIMON-CARVES, LTD.**, Cheadle Heath, Stockport, Cheshire, quoting Ref. XO.50.

## APPOINTMENTS VACANT

**COMPANY EXPANDING** their civil engineering department have immediate VACANCIES for the following staff based at head office, near Oxford: **EXPERIENCED QUANTITY SURVEYOR, ENGINEER AND SURVEYOR FOR SITE MEASUREMENT, DAYWORK AND VARIATION CLERKS.** These appointments are permanent and pensionable after trial period, with excellent prospects. It is essential that applicants for all positions have had considerable experience with civil engineering contractors.—Apply, stating age and experience, to the Chief Estimator and Surveyor, **AMEY'S ASPHALTE CO., LTD., Sutton Courtenay, near Abingdon, Berks.** Interviews also arranged by ringing Sutton Courtenay 27516/7/8.

**SITE ENGINEERS.**—Young men (under 30 years), experienced in large-scale contracting. **REQUIRED** for various contracts in north and north-west. Candidates should give detailed account of career to date, together with education, qualifications, and salary expected, to Personnel Officer, **HOLLAND & HANNEN AND CUBITT'S (NORTH-WEST), LTD., Building and Civil Engineering Contractors, New Chester Road, Bromborough, Wirral, Cheshire.**

## W. AND C. FRENCH, LTD.

Invite applications for the following building and civil engineering vacancies:

- (1) **BUILDING AGENTS**  
With experience of building construction preferred, for site measurement and final accounts.
- (2) **QUANTITY SURVEYORS**  
With experience of taking-off building materials for ordering purposes, preferably carpenter-trained.
- (3) **TAKERS-OFF**  
With experience of taking-off building materials for ordering purposes, preferably carpenter-trained.
- (4) **EXPERIENCED BUILDING FOREMEN**  
Preferably time-served carpenters.

Good salaries, excellent working conditions, superannuation after five years' service. Write full details of age, experience and salary required, and quoting Ref. No. 315, to:

Personnel Manager,  
**W. AND C. FRENCH, LTD.,**  
50 Epping New Road, Buckhurst Hill, Essex.

**WAGES CLERK,** conversant with building and civil engineering industries. **REQUIRED** for head office of large organisation in London, N.W.6. Salary according to age and experience. Excellent pension and life assurance schemes.—Write full details of age, experience and salary required, to Box V.2187, "The Contract Journal."

**MATERIAL CHECKER AND TIMEKEEPER WAGES CLERK.** Applications invited from experienced men for the above two positions for contracts in the Midlands area. Good terms and prospects offered to suitable men.—Applications to **WILSON LOVATT AND SONS, LTD.,** Clarence Street, Wolverhampton.

**CIVIL ENGINEERS** with 4/5 years' contracting experience are invited to apply for vacancies with British contractors operating in the Middle East. This is an excellent opportunity to join a group of companies with wide interests in East and West Africa, Mediterranean and U.K. construction projects.—Write full details of experience to Box V.2188, LPE, Romano House, 399/401 Strand, London, W.C.2.

**CHIEF DRAUGHTSMAN REQUIRED** for head office of civil engineering contractor near Buckingham Palace.—Write full details of experience, age and salary requirement, to Box C1579, LPE, Romano House, 399/401 Strand, London, W.C.2.

**PLANT REPAIR FOREMAN REQUIRED** for depot at St. Albans, preferably aged 35/45, with comprehensive experience all classes of contractors' plant and accustomed to controlling staff. Salary range £850/£950. Pension scheme, holiday this year.—Apply by letter only, giving full details, to Secretary, **HOLLOWAY BROTHERS (LONDON), LTD.,** 157 Millbank, London, S.W.1.

## JAMES MILLER AND PARTNERS, LTD.

**REQUIRE** an experienced **SITE ENGINEER** for civil engineering contract in the London area. Sound knowledge of reinforced concrete construction is essential, together with the normal site engineering duties. The selected applicant will, if satisfactory, be posted to the permanent staff in due course and be given an opportunity to progress to the status of engineer agent. Pension and bonus schemes in operation.—Full particulars to:

**JAMES MILLER AND PARTNERS, LTD.,**  
Pump Lane, Hayes, Middlesex.

**CONTRACTS AGENT,** preferably qualified civil engineer with previous experience as agent. **REQUIRED** by civil engineering contractors for work in North Yorks. and South Durham area. Must be able to assume complete control, develop and expand, progressive engineering department. Salary range £1,200-£1,500. Car provided. Superannuation scheme.—Write, in confidence, stating age, full details of experience and previous employers, etc., to Box V.2176, "The Contract Journal."

**GEORGE COHEN SONS AND CO., LTD.,** REQUIRE a young energetic **INSIDE SALESMAN** for their contractors' tools and protective clothing section. Good prospects. Pension scheme after probationary period.—Applications, in writing, stating age and salary required, to Personnel Manager, Wood Lane, London, W.12.

**HOWARD FARROW, LTD.,** REQUIRE **SENIOR SITE ENGINEERS** and **SUB-AGENTS** for civil engineering contracts. Applicants must have had practical experience on site of various types of work. Positions are permanent and offer good conditions of employment with pension scheme and opportunities for promotion. Applications, giving full details of training, experience and qualifications, to Ref. FGC, Howard Farrow, Ltd., C.E. Division, Golders Green Road, N.W.11.

**HIGGS AND HILL, LTD.,** REQUIRE in head office **R.C. DESIGN ENGINEERS** experienced in design of multi-storied structures, heavy foundations and retaining walls. Knowledge of design of temporary works, cofferdams and shoring.—Write, in confidence, stating age, full details of experience and previous employers, etc., to Box V.2176, "The Contract Journal."

**SETTING-OUT ENGINEERS** to be based at head office. Candidates should have had at least two years' experience with a contractor on works sites. A working knowledge of concrete mix design and control would be an advantage.

Also on sites in London and the Home Counties, **ENGINEER, SUB-AGENTS, SENIOR ENGINEERS** and **JUNIOR ENGINEERS** for setting out and concrete control. Candidates should have had at least two years' site experience (for the junior posts). The work covers roads, bridges and structural frames in reinforced concrete, with heavy foundations and retaining walls.

All posts are pensionable and offer good opportunities for advancement and permanent salaries offered.—Write, stating qualifications, experience and salary required, to the Secretary, Higgs and Hill, Ltd., Crown Works, South Lambeth Road, S.W.8.

## APPOINTMENTS VACANT

**TOWER CRANE ERECTORS REQUIRED.** Must be fully experienced, including fitting, and capable of working at heights.—Applications, in writing, giving full details of experience and previous employers, to Box V.2189, "The Contract Journal."

**ESTIMATOR:** Old-established Midland firm of civil engineering and building contractors are seeking an experienced **ESTIMATOR** to take charge of their estimating department. He must have a comprehensive practical experience of site operations and must be used to estimating for contracts up to £250,000 in value. The initial salary offered will be in the range £1,500 to £1,750, and it is envisaged that the successful applicant will be appointed to the board after a satisfactory period of three years. A car will be provided and a "Top Hat" pension scheme is in operation. Assistance with moving will be given, if required.—Write in strictest confidence to Box V.2173, "The Contract Journal."

**SCOTTISH LAND DEVELOPMENT CORPORATION** Managing Agents for National Coal Board, Opencast Executive, Westfield Site, Klingesside, Fife, REQUIRE **OFFICE MANAGER/ACCOUNTANT, STORE-KEEPER and FOREMAN ELECTRICIAN,** with experience of large electrically powered excavators and high-tension switch gear.—Replies should be addressed for the attention of Mr. A. K. Gilbertson at the above address

For Advertisements received too late for classification see page 1505

## APPOINTMENTS WANTED

**AGENT,** wide experience, including motorways, medium and large contracts, **SEEKS CHANGE.** Write Box W.2132, "The Contract Journal."

**CONTRACTORS' ENGINEER AND AGENT,** professionally trained, operating small company engaged on plant hire. **SEEKS PART-TIME WORK** with small contractor in Midlands area on fee or retainer basis. Would consider possible amalgamation. Write Box W.2133, "The Contract Journal."

**QUARRY MANAGER SEEKS APPOINTMENT.** Sand and gravel. Conversant with all methods of production, also planning, erection, restoration. Write Box W.2140, "The Contract Journal."

**MAN, 31, 10 years' B. and C.E. experience,** invoices, ledger, plant, checking, storekeeping, office management, **SEEKS PROGRESSIVE POSITION,** not London.—Write Box W.2125, "The Contract Journal."

**PLANT MANAGER REQUIRES POSITION** of RESPONSIBILITY. Lifetime experience in control of mechanical plant. Sound administrator. Southern area preferred.—Write Box W.2088, "The Contract Journal."

**FORMER well-known BARRISTER SEEKS EMPLOYMENT** with large civil engineering contractors as **CLAIMS ASSESSOR and LEGAL ADVISER.** Salary or percentage of claims.—Write Box W.2165, "The Contract Journal."

**PLANT MANAGER, 35 years' experience** of heavy contractor plant and machinery, **SEEKS NEW APPOINTMENT.** Write Box W.2192, "The Contract Journal."

**SENIOR AGENT ENGINEER,** experienced home and overseas all aspects roads, bridges, pipelaying, sewage and various R.C. structures of magnitude, including marine.—Please reply Box W.2148, "The Contract Journal."

**POSITION REQUIRED** as **CONTRACTS MANAGER** or **AGENT, 25 years' experience** building and civil engineering, past 10 years in above capacity. London or southern area preferred.—Write Box W.2158, "The Contract Journal."

**CIVIL ENGINEERING CONTRACTORS' AGENT,** based in London, having 20 years' varied experience in all aspects of the business. **SEEKS APPOINTMENT** where conscientious and trustworthy service will be rewarded by senior permanent position. Write Box W.2181, "The Contract Journal."

**CONTRACTS MANAGER/PLANNING EXECUTIVE,** age 40, **SEEKS INTERESTING APPOINTMENT** with C.E. contractors. Available at short notice. Write: BM/WEVZ, London, W.C.1, quoting 1/2/R.

**CIVIL ENGINEER,** aged 33, wishing to settle in rural surroundings, **SEEKS POSITION** with country contractor.—Write Box W.2087, "The Contract Journal."

## WORK REQUIRED

**MOTOR BOAT OWNERS REQUIRE** **CONSTRUCTION WORKER, ATTENDANCE, PERSONNEL, GOODS TOWAGE, etc.** Craft and labour supplied.—Apply: **TOMAS BROS.,** 62 Sussex Road, East Ham, London, E.6. Telephone: GRA. 6697/3151.

**SITE CLEARANCE, BULK EXCAVATION.** **JANES AND CO., LTD.,** Trading Estate, Slough. Telephone: Slough 20361—Ext. 4.

**SAM BOOTH, LTD.,** Perrymount Chambers, Haywards Heath, Sussex. Tel: Haywards Heath 1126 and 1258. **SUB-CONTRACT or HIRE:** D9s, with Bulldozer and Caterpillar 463 Scrapers.

**ALLEN OXFORD GRADERS for HIR** GRASSPALLETS, LTD., Hampton Hill, Middlesex. Telephone: Molesey 4343.

**EARTHMOVING, LEVELLING, LAND DRAINAGE, RECLAMATION, etc.** Consult the Surface Specialists. **SURFACE MAINTENANCE SERVICES, LTD.,** 124 Old Christchurch Road, Bournemouth, Tel. 24673. Branches throughout the country.

**FOR HIRE IN MIDLANDS, new Blaw Knox PF90 PAVING MACHINES,** complete with experienced operators and gadi if required. Sub-contract work or price per ton for material laid (Macadam, Asphalt, Wetmix, Leamix Concrete, etc.).—For full details, apply: **CAMMIDGE ROAD CONSTRUCTIONS, LTD.,** 14/28 Henrietta Street, Coventry. Tel: Coventry 88473.

**WANTED, EXCAVATION, SITE CLEARANCE and DEMOLITION WORK.** **R. BARKER (PECKHAM), LTD.,** New Cross 3337.

**EXCAVATION SUB-CONTRACTS.** Technical staff available to analyse, programme and price complex projects. Particular attention given to finish and compaction. D9, D8, TD18 and TD14 Scrapers, Excavators, Loading Shovels and Lorries available with competent and imaginative supervision for execution of work.—**DICK HAMPTON, Broadview Farm, Blacknest, Alton, Hants.** Tel: Bentley 2241.

**BULK EARTHMOVING,** direct contract or sub-contract. Also **BULLDOZERS and SCRAPERS** for **HIRE.**—**FRANK R. WALPOLE, LTD.,** 126 Wing Road, Leighton Buzzard, Beds. Leighton Buzzard 3351.

## WORK REQUIRED

**SPECIALISED EXPLOSIVES SERVICES.**—**U.K. and OVERSEAS MOBILE UNITS** coverage on all types of strong points, sea walls and dangerous structures, etc.—**124 Old Shoreham Road, Southwick, Sussex.** Tel: Southwick 3791 or Shoreham 4193.

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**EXCAVATIONS, SITE CLEARANCES, DEMOLITION and PLANT HIRE, SUB-CONTRACT WORK WANTED, any area.**—**D. W. STONE, LTD.,** St. Leonards Road, Hove, 3, Sussex. Tel: Hove 46396.

**FOR HIRE, One Drott and Six TIPPER LORRIES, SITE CLEARANCE, Direct or sub-contract.** **W. DOTE AND CO.,** Demolition Contractors, 188 Plumstead High Street, S.E.18. Woolwich 6318.

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**NORTHERN REPRESENTATIVE: 91 Shaw Road South, Shaw Heath, Stockport. Telephone: STOCKPORT 3082.**

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#### BARNET URBAN DISTRICT COUNCIL.

##### SALE BY TENDER.

**TENDERS** are invited for the PURCHASE of a 1950 LEVIN ROAD-SPRINKLER-SWEEPER-COLLECTOR on Thorncroft Nippy chassis with power-operated Tipping Body.

The machine may be viewed at the Mays Lane Depot on any weekday, Monday-Friday, between 9 a.m. and 5 p.m., by arrangement with the Engineer and Surveyor.

Tenders should be addressed to Mr. R. G. Narbeth, B.Sc.(Eng.), A.M.I.C.E., Engineer and Surveyor, Ravenscroft House, Wood Street, Barnet, Herts. to arrive not later than 12 Noon on the 6th JULY, 1960.

ALFRED S. MAYES, Clerk of the Council.

Municipal Offices,  
Wood Street,  
Barnet, Herts.  
17th June, 1960.

#### LINCOLNSHIRE RIVER BOARD.

##### FOR SALE BY TENDER.

One 19RB EXCAVATOR, No. 5463, Engine No. 204952, C10, 3VQBN, Dragline Equipment only.

One 10RB EXCAVATOR, No. 3920, Engine No. 192119, Class VRON, Dragline Equipment only.

Particulars of Inspection and Form of Tender obtainable from the CLERK OF THE LINCOLNSHIRE RIVER BOARD, 50 Wide Bargate, Boston, to whom completed Tender Forms must be returned not later than Noon, 13th July, 1960.

### SALES BY TENDER NORTHUMBERLAND COUNTY COUNCIL.

#### COUNTY SURVEYOR'S OFFICE.

##### SALE OF SECOND-HAND PLANT.

**OFFERS** are invited for the UNDERMENTIONED ITEMS of SECOND-HAND HIGHWAY PLANT, not guaranteed to be in working order, together with Spare Parts for each machine, as lying at the Council's Repair Depot, Tinklers Turn, Longbenton, Newcastle upon Tyne, 12, where they may be inspected between the hours of 10 a.m. and 4 p.m., Mondays to Fridays, by appointment with Mr. H. R. Pordum, foreman (Telephone 66-2145).—

One DA Caterpillar Diesel Tractor, with Angle-dipper, Scraper, and Spare Parts, year 1948, DNL 472.

One Ruston-Bucyrus 10RB Diesel Excavator, with Face Shovel, Skimmer, Dragline, together with Bucket and Spare Parts, year 1938, JR7380.

Offers are to be made on the Council's official Tender Form, which may be obtained at the above Depot or by application to the County Surveyor, Phoenix House, Newcastle upon Tyne, 1.

Tenders, in a plain sealed envelope, addressed to the Clerk of the County Council, County Hall, Newcastle upon Tyne, 1, must be delivered by 9 a.m. on the 11th JULY, 1960.

E. P. HARVEY, Clerk of the County Council.

### BUCKS. COUNTY COUNCIL.

#### SECOND-HAND PLANT FOR SALE.

**LORRIES, VANS, ROAD SWEEPER-COLLECTORS, HIGH-LIFT SHOVELS, Steam ROLLERS and sundry PLANT.** Tender Forms available from the COUNTY SURVEYOR, County Offices, Aylesbury. Closing date for the receipt of Tenders, MONDAY, 11th JULY, 1960.

### COUNTY BOROUGH OF HALIFAX.

#### TENDERS are invited for the FOLLOWING SURPLUS ITEMS of PLANT and EQUIPMENT.—

One Municipal 400 gallons Mechanical Sprayer, 1947.

One Bristowe 250 gallons Mechanical Sprayer, 1950.

One Rapier 7T Concrete Mixer, 1946.

One Parker 7D Concrete Mixer, 1951.

One Liner ST Concrete Mixer, 1950.

One Road Machine Weighbatcher, 14 cu. ft. capacity, 1950.

The plant in question can be seen by appointment made at the Borough Engineer's Office, Crossley Street, Halifax. Tenders, in plain sealed envelopes, endorsed "Tender for Surplus Plant," to be delivered to the undersigned by 11th JULY, 1960.

RICHARD de Z. HALL, Town Clerk.

Town Hall,  
Halifax.

### COUNTY BOROUGH OF BURY.

**TENDERS** invited for PURCHASE of SURPLUS EQUIPMENT at Foid Street Central Kitchen. Further details and Form of Tender obtainable from Director of Education, Town Hall, Bury.

Equipment may be inspected at Foid Street Kitchen on 5th JULY, 1960, or at other times by appointment.

Tenders, in plain sealed envelope, endorsed "Tender for Purchase of Equipment—Foid Street Kitchen," must reach me not later than 9th JULY, 1960.

EDWARD S. SMITH, Town Clerk.

Town Hall,  
Bury.

16th June, 1960.

### BOROUGH OF ENFIELD.

#### SALE OF VEHICLES.

The CORPORATION have the FOLLOWING SECOND-HAND VEHICLES for SALE:—

One Bedford 3-ton 3-way Tipper, first registered 1950.

Two Bedford 3-ton 3-way Tippers, first registered 1951.

Two Bedford 30cwt. Trucks (one ex Government), first registered 1952.

Two Bedford 10 15-cwt. Vans, first registered 1953.

All are in running order but not licensed, and are offered as now lying at the Council's Depot. Offers will be considered separately for each item.

Fuller particulars and form upon which offers are to be submitted by JULY 11th, can be obtained from H. DERVYCK PEAKE, M.Sc.(Eng.), M.I.C.E., Borough Engineer and Surveyor, 7 Little Park Gardens, Enfield, Middlesex.

CYRIL E. C. R. PLATTEN, Town Clerk.

Public Offices,  
Enfield,  
June, 1960.

### CITY OF MANCHESTER.

The TRANSPORT COMMITTEE invite OFFERS for the FOLLOWING SECOND-HAND EQUIPMENT, which is surplus to requirements:—

(a) One B.T.H. 1,500-Amp 400-V 50-cycle Metering and Isolating Cubicle with various items of equipment.

(b) One Macfarlane Alternator, Type ADD75A, Levaland TD5 Engines.

(c) Bedfords, Form of Offer, etc., obtainable from the General Manager, MANCHESTER CORPORATION TRANSPORT DEPARTMENT, 55 Piccadilly, Manchester, 1.

Offers returnable by 10 a.m. on the 5th JULY, 1960.

### AMERSHAM RURAL DISTRICT COUNCIL.

#### ENGINEER AND SURVEYOR'S DEPARTMENT.

**OFFERS** are invited for One 800-gallon (1947) Dennis CESSPOOL EMPTYING VEHICLE (Petrol), JPP554, with four 10ft. lengths of 3in. hose. In working order. The machine can be seen at the Council's London Road Depot, Amersham, between the hours of 8 a.m. and 4.30 p.m.

Offers should be in writing, and should be received by the undersigned in an envelope endorsed "Offer for Cesspool Emptying Machine," not later than 9 a.m., THURSDAY, June 30th, 1960.

H. E. BUXTON, Clerk to the Council.

Elmodesham House,  
42 High Street,  
Amersham, Bucks.

### INVENTIONS

**INDUSTRIAL ENGINEERS OF REPUTE** invite, in strict confidence, DETAILS of INVENTIONS with object of manufacturing and world distribution. Write Box K.L.517, "The Contract Journal."

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Benford 5 3/4 Portable Diesel driven Concrete Mixer; B.H.C. Ant Queen 10cwt. Diesel driven Mobile Hoist, with 60ft. Sectional Mast; Liner Portasaw Portable Petrol driven C.I. Circular Saw Bench; Two Multico 12in. Model A1/3 Petrol driven Circular Saw Benches; Clipper Model GW Petrol driven Masonry Saw; Wickman 1in. Portable Petrol driven Lift and Force Pumping Set; Voispray Portable Petrol driven Paint Spraying Air Compressor Unit; Bedford 12cwt. Delivery Van; 5,000ft. Steel Scaffold Tubing, with Couplings; 150 Kwikform Steel Scaffold Frames; 500 cu. ft. 8in. x 2in. W.P. Scaffolding Battens; 100 Wooden Trestles; 15 Wooden Ladders; 20 Kwik Props; 10 Navy Barrows; Six Capco Test Cube Moulds; Set Greening Aggregate Test Sieves; Towers Rotating Weight Balance; Navy Tools; F.C. Pipes and Connections; Three Tilley Floodlight Projectors; Eight Sectional Wooden Huts, 36ft. x 12ft., 24ft. x 12ft., 18ft. x 18ft., and 12ft. x 12ft., etc.

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#### SHIRLAW, ALLAN AND CO., AUCTIONEERS, HAMILTON.

have received instructions from Andrew Clark, Esq. (Messrs. Nelson, Gilmour, Scott and Co.), C.A., 145 St. Vincent Street, Glasgow, Liquidator of above company, to sell, by AUCTION, as above.

On view day prior to Sale.

Hamilton, June, 1960.

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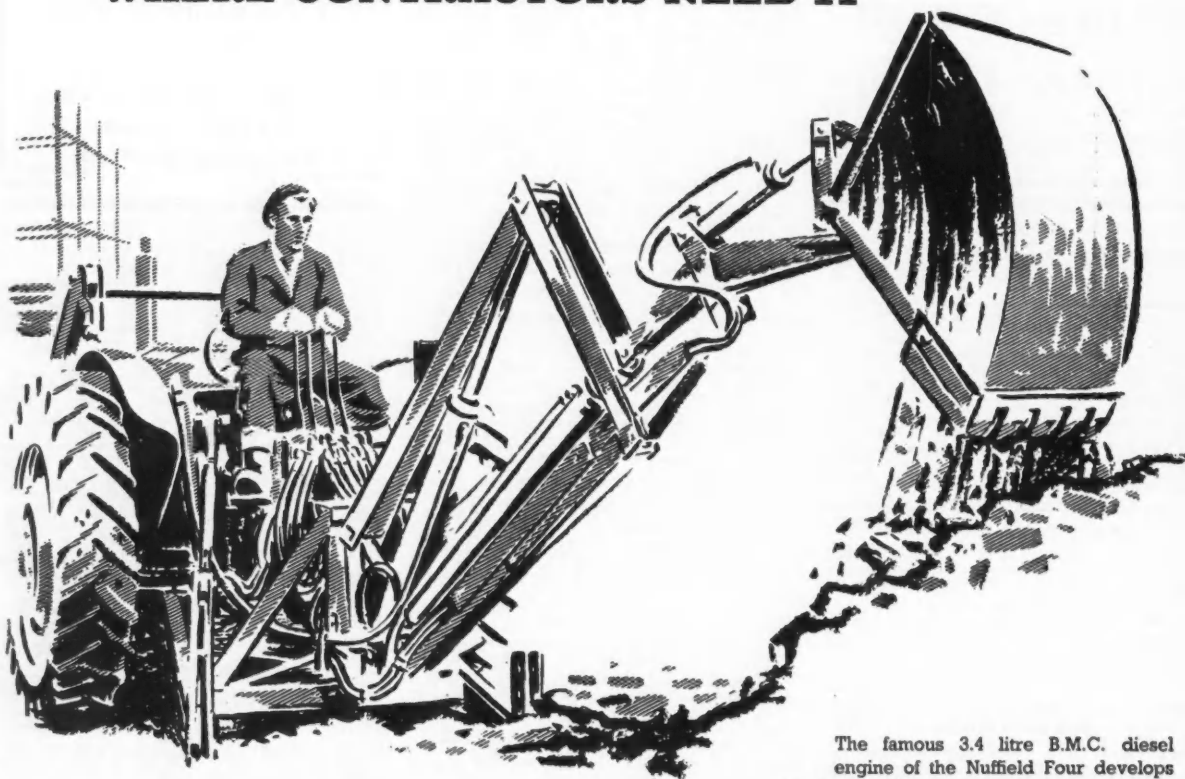
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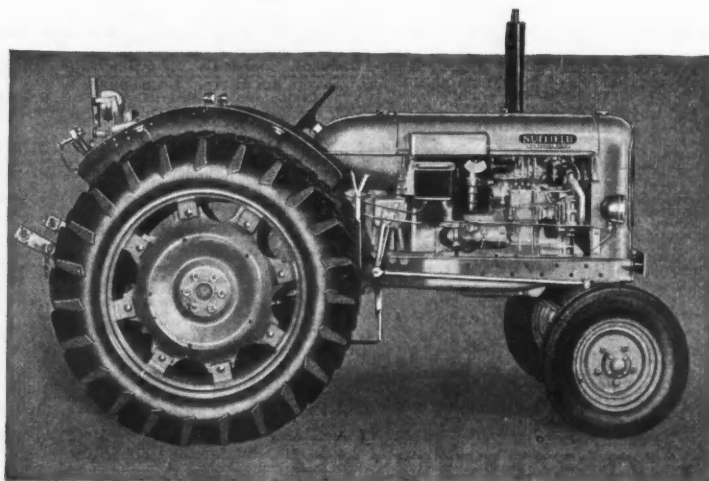
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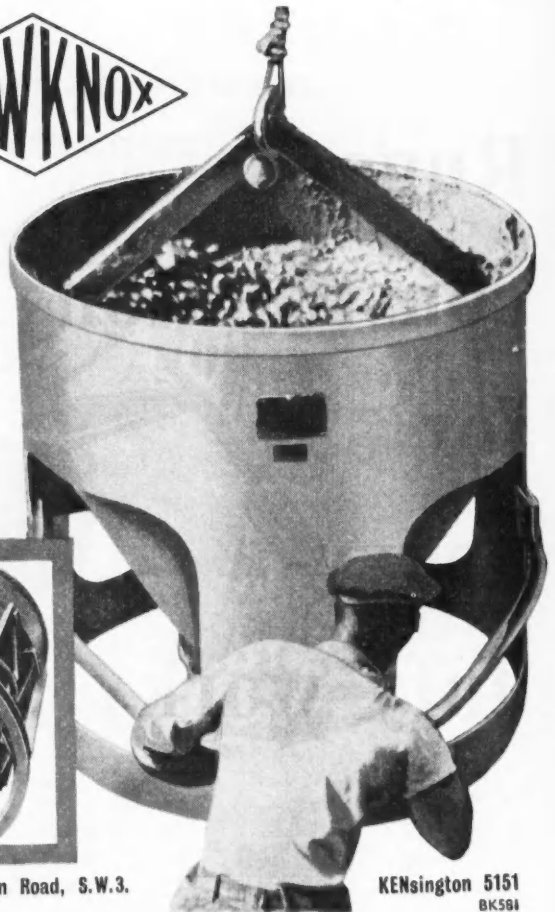
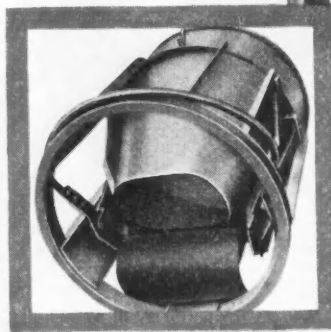
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## BOROUGH OF RAMSGATE.

**RESURFACING OF BELLEVUE ROAD.**

**FIXED-PRICE TENDERS** are invited from experienced contractors for the RESURFACING of approx. 3,755 sq. yd. of BELLEVUE ROAD with HOT ROLLED ASPHALT laid by machine in two courses. The work includes taking up the existing wood block surfacing.

The Conditions of Contract, Specification, Bills of Materials and Form of Tender may be obtained from Borough Engineer and Surveyor, Municipal Buildings, Ramsgate, upon payment of Two Guineas, which will be returned upon receipt of a bona-fide Tender, not subsequently withdrawn.

Tenders, endorsed "Bellevue Road—Resurfacing," must reach the undersigned, in plain sealed envelope not bearing any name or mark indicating the sender, by not later than Noon on SATURDAY, 9th July, 1960.

The Council do not bind themselves to accept the lowest or any Tender.

K. F. SPEAKMAN,  
Town Clerk.

Municipal Buildings,  
Rams-gate,  
16th June, 1960.

**ASSISTANT ENGINEER (Civil) REQUIRED** for their London office by the Crown Agents for Oversea Governments and administrations for appointment to pensionable establishment on probation for two years. Commencing salary between £830 at age 25, and £1,125 at age 34 or over, in scale rising to £1,300, fully qualified offers, at least 27 years of age, may be eligible for special increase of £75 within maximum of scale after two years' service. Liberal leave. Five-day week. Candidates must be corporate members of the Institution of Civil Engineers or have passed sections A and B of the qualifying examination, or hold an exempting degree. They must have had experience in the office of a civil engineer, the civil engineering branch of a municipality or a civil engineering contractor, and experience of water supply schemes, including pumping and treatment plant and/or sewerage schemes. Alternatively, consideration will be given to candidates with experience in use of road-making and a general civil engineering contractors' plant. Duties include examination of civil engineering projects, preparation of specifications for materials, equipment and plant, adjudication upon tenders, and correspondence of a technical nature.—Write to the Crown Agents, 1 Millbank, London, S.W.1, a State age, name in block letters, qualifications and experience, and quote M2A/51056/CA.

C6052/7.

**AGENT REQUIRED** for installation of eight miles of 43in. o.d. Must be experienced in the preparation with Viking-Johnston coupling joints, including river crossings and other ancillary works between Beattock and Lanark, Southern Scotland.—Apply BORDER ENGINEERING CONTRACTORS, LTD., 125 Queen Street, Whitehaven.

**SENIOR GENERAL FOREMAN, SECTION FOREMAN, CARPENTER FOREMAN AND GANGERS.** Applications invited from experienced men in the above positions to join the permanent contract staff of a C.E. and B. contractor with an expanding programme of building contracts in the Midlands area. A good salary and allowances and prospects for promotion will be offered to suitable applicants.—Send full particulars, stating age and experience, to WILSON LOVATT AND SONS, LTD., Clarence Street, Wolverhampton.

**YOUNG CIVIL ENGINEER REQUIRED** as Personal Assistant to Works Director of rapidly expanding company in North-East England.—Write Box V.1975, "The Contract Journal."

**DRABBLE CONSTRUCTION, LTD. QUANTITY SURVEYOR REQUIRED** for large contracts in Corby area. Must be experienced in the preparation of interim certificates and final accounts, together with sub-contractors' accounts and direct labour targets for all trades. Applicants should hold a current clean driving licence.—Write in the first instance, stating age, training and qualifications and experience, to the Area Surveyor, DRABBLE CONSTRUCTION, LTD., Wellingborough, Northants. All replies will be treated in the strictest confidence.

**PLANT HIRE.**—Established Scottish company, operating substantial fleet of earthmoving equipment, REQUIRE SENIOR ASSISTANT to operate the hire department. Applicants for this senior appointment should have a good knowledge of contractors' plant, heavy haulage or other allied industry, be thoroughly conversant with office routine, and have first-class organising ability. Excellent prospects in expanding organisation.—Write Box V.2174, "The Contract Journal."

**HENRY BOOT AND SONS (CIVIL ENGINEERING), LTD.,** have FOLLOWING VACANCIES on civil engineering work in Chester and Mid-Cheshire: SUB-AGENT/ENGINEER. Must have previous all-round experience on civil engineering projects, capable of planning, co-ordinating supplies and be responsible for interim and final certificates. SITE ENGINEERS and ENGINEERING ASSISTANTS for setting out, weekly and monthly measurements. Previous experience on civil engineering work essential. GENERAL FOREMEN. Must have good background of first-class work satisfactorily completed. It is anticipated that the appointments will be permanent in that area to satisfactory applicants, and offer considerable scope for further advancement. Pension scheme and profit-sharing scheme operating after initial satisfactory probationary period.—Apply for application form and stating appointment required to Director, HENRY BOOT AND SONS (CIVIL ENGINEERING), LTD., Banner Cross Hall, Sheffield, 11.

**HENRY BOOT AND SONS (CIVIL ENGINEERING), LTD.,** have vacancy on civil engineering staff for SUB-AGENT/ENGINEER for large earthmoving contract extending over 10 years. Previous experience on large-scale mechanised or open cast coal sites essential. Permanent pensionable appointment to satisfactory applicants. Profit-sharing scheme in operation. Application forms from Director, Henry Boot and Sons (Civil Engineering), Ltd., Banner Cross Hall, Sheffield, 11.

**SENIOR AGENT.** First-class man for large London contract. Remuneration up to £1,800 per annum. Details to Box V.2188, "The Contract Journal."

**ESTIMATOR REQUIRED** for Merseyside office of interesting and varied civil engineering and building tenders for contracts over a wide range of price and nature. The post requires ability, initiative and adaptability. Applicants, preferably aged 25-35 and qualified, should have a knowledge of price building-up. Site experience with contractors using modern methods of construction is desirable. Position permanent. Pension scheme. Modern office, good working conditions. Present holiday arrangements honoured.—Write, giving summary of qualifications and experience, present salary, etc., to Box V.2184, "The Contract Journal."

## BOROUGH OF TIPTON.

**GROVELAND ROAD HOUSING SITE—CONTRACT NO. 1.**

**TENDERS** are invited for the CONSTRUCTION of 1,000 sq. yd. of CARRIAGEWAYS with KERBS and other ancillary works, and 350 lin. yd. of 6in. and 9in. dia. SEWERS.

Drawings and General Conditions of Contract may be seen and Form of Tender, Specification and Bill of Materials may be obtained on application to HORACE N. WOODARD, M.B.E., M.I.Mun.E., Borough Engineer and Surveyor, Municipal Buildings, Sedgley Road West, Tipton, on payment of a deposit of Two Guineas, which will be refunded only on receipt of a bona-fide Tender together with all documents. Cheques should be made payable to "Tipton Corporation."

Tenders to be returned, in the envelope provided, not bearing any name or mark to indicate the sender, must reach the undersigned not later than First Post on FRIDAY, the 8th of July, 1960.

The Corporation does not bind itself to accept the lowest or any Tender.

K. W. MADIN,  
Town Clerk.

Municipal Buildings,  
Sedgley Road West,  
Tipton.

## CITY OF PLYMOUTH.

**TENDERS** are invited for the SUPPLY of a total length of 4,000 lin. yd. of 6in. and 9in. dia. GLAZED STONEWARE PIPES, PRECAST CONCRETE MANHOLES and GULLY POTS, and 800 lin. yd. of 12in. dia. CONCRETE PIPES.

Full details, Form of Tender, etc., may be obtained from the City Engineer, The Guildhall, Plymouth, and Tenders are to be returned to the TOWN CLERK, Pounds House, Peveler, Plymouth, not later than 10 a.m. on MONDAY, 11th July, 1960.

**JUNIOR SITE ENGINEERS REQUIRED** by national firm of building and civil engineering contractors for contracts in London area and the Midlands. Permanency and excellent prospects for keen young men.—Write Box V.2186, "The Contract Journal."

**SITE ENGINEERS REQUIRED** for bridge construction on motorway, near London.—Write, stating age, experience and salary required, to JOHN COCHRANE AND SONS, LTD., Poyle Road, Colnbrook, Bucks. Telephone: Colnbrook 2544.

**LIVE SALESMAN REQUIRED** for busy office, dealing with contractors' plant hire and general equipment. Progressive staff. Free pension scheme; house available.—FRED WATKINS (ENGINEERING), LTD., Coleford, Glos.

**VACANCY** arises for an ASSISTANT ESTIMATOR (age group 22-26) or TRAINEE ESTIMATOR (age group 17-21) in the asphalt and macadam surfacing department in head office. Good salary, conditions and prospects.—Written applications only to GEORGE WIMPEY AND CO., LTD., 27 Hammer-smith Grove, London, W.6.

**WEST COUNTY** building firm of medium size REQUIRES competent MAN to manage yards, stores and transport. Must have good knowledge of the trade. Salary commensurate with experience and ability. Age up to 45.—Write, stating age and experience, to Box V.2178, "The Contract Journal."

**ASSISTANT QUANTITY SURVEYOR REQUIRED** for major road and bridge work contract in Lincolnshire. Fine prospects, permanent position, pension scheme.—ROBERT MCGREGOR AND SONS, LTD., Turnoaks Lane, Chesterfield, Chesterfield 7056.

**ADVERTISING—SENIOR, ASSISTANT REQUIRED** for public department of company manufacturing general engineering and earthmoving equipment. Applicants should preferably have engineering background and be able to write copy for technical literature.—Write, giving details of age and salary required, Box V.2177, "The Contract Journal."

**Civil engineering contractors REQUIRE AGENTS and CIVIL ENGINEERS** for contracts in North Scotland. Must be prepared, if necessary, to live away from home.—Write, giving particulars of experience, etc., to Box 1461, William Porteous and Co., Glasgow.

**PAINTING CONTRACTORS REQUIRE GENERAL FOREMAN** for London and south-east England. Large number of industrial contracts in hand and to commence. Permanent pensionable appointment. Transport available.—Write, giving age, full particulars of experience and salary required. First-class opportunity for man with practical experience of industrial and structural steelwork painting requirements.—Write Box V.2166, "The Contract Journal."

**SITE ENGINEER REQUIRED** by civil engineering contractors for roadworks and main drainage contracts in Home Counties. A salary range of £650-£1,000 per annum, with good prospects for a keen young man who is confident and experienced in setting out, etc.—Apply, in writing, giving details of training and experience, age and previous employers, etc., to Box V.1984, "The Contract Journal."

**GRADUATE CIVIL ENGINEER** or equivalent REQUIRED as DESIGNER for interesting work on industrial structures. Excellent opportunity for obtaining A.M.I.C.E. or A.M.I.Struct.E. Permanent position with good salary, bonus scheme and opportunity for advancement.—Applicants should write, stating age, qualifications and details of career to date, to THE MITCHELL CONSTRUCTION CO., LTD., Wharf Works, Peterborough.

**SUB-AGENTS and SECTION ENGINEERS** urgently REQUIRED by major civil engineering contractors for contract in South Wales. Good salary and appointment to permanent staff offered to suitable applicants. Write, stating age, qualifications and experience, in strict confidence, Box V.2171, "The Contract Journal."

**SITE CLERKS, experienced,** for London road contracts. Wages, timekeeping, costs, etc. Permanent and pensionable.—Apply, quoting age, experience, and salary required, to HYPATRIC AND SON (CONTRACTORS), LTD., 455 Old Ford Road, London, E.3.

**JUNIOR SITE ENGINEER, 20-23 years of age,** REQUIRED by a civil engineering company in the North of England. Previous experience with instruments essential. Excellent opportunities in an expanding company for the right man.—Apply in writing, stating age, details of previous positions held, and salary required, to Box V.2154, "The Contract Journal."

**VACANCY** exists with well-known building and civil engineering contractors in Birmingham for a SENIOR SURVEYOR with sound knowledge and experience of interim valuations and final accounts. A salary range of £1,250-£1,500 will be offered to the applicant of proven ability, possessing initiative and drive. Pension and bonus scheme in operation.—Full particulars to Box V.2185, "The Contract Journal."

## COUNTY BOROUGH OF NEWPORT.

**WATER DEPARTMENT.**

### LLANTRISANT INTAKE WORKS.

Contractors wishing to TENDER for the CONSTRUCTION of a REINFORCED CONCRETE INTAKE WORKS, a BRICK-CLAD REINFORCED CONCRETE-FRAMED PUMP HOUSE, together with interconnecting Reinforced Concrete Culvert, are requested to note the Engineer and Manager, A. E. GUILD, B.Sc., M.I.C.E., at Royal Chambers, Crown Arcade, Newport, Mon. Preliminary Drawings are available, and the site, which is on the east bank of the River Usk, approx. three miles south of the town of Usk, may be visited by arrangement. Tender documents will shortly be available and will have to be lodged with the Corporation before the end of July.

The Intake Works will have an ultimate capacity of 17 m.g.d. and the Pump House will be built to house three 500-h.p. electric vertical spindle pumps, ancillary switch gear and automatic screens. The pumping plant is not included in the Contract. The Consulting Engineers are MESSRS. T. and C. HAWKSLEY, Great Scotland Yard, Whitehall. Only contractors who have had considerable experience in this type of work will be considered.

J. G. ILES,  
Town Clerk.

Civic Centre,  
Newport,  
Mon.

## CITY OF CAMBRIDGE.

**ARBURY ROAD HOUSING ESTATE: NORTH SITE.**

### CONSTRUCTION OF ROADS AND SEWERS—STAGE V.

**TENDERS** are invited for the CONSTRUCTION of ROADS AND SEWERS at the ABOVE SITE, comprising: 8,500 sq. yd. of Hot Rolled Gravel Asphalt Carriageway.

700 lin. yd. of 6in. dia. of Soil and Surface Water Sewer. 1,200 lin. yd. of 9in. dia. and other ancillary works. Applications for the Form of Tender, Bills of Materials and Specification should be made to the City Engineer and Surveyor, The Guildhall, Cambridge. Tenders are to be returned by 3 p.m. on the 1st SEPTEMBER, 1960. Applications must be accompanied by a deposit of Five Guineas, which will be returnable on receipt of a bona-fide Tender. The Drawings and General Conditions of Contract can be inspected at the City Engineer's Office. The lowest or any Tender will not necessarily be accepted.

ALAN H. I. SWIFT,  
Town Clerk.

The Guildhall,  
Cambridge.

**EXPERIENCED SALES REPRESENTATIVE,** with technical knowledge of asphalt/tar roofing, REQUIRED to call on architects and builders, etc., in the Northern Home Counties and London. Preference will be given to man with existing connections. Guaranteed minimum salary and commission £900 p.a. which can be exceeded by conscientious person. Car provided and expenses paid.—Applications in writing, giving full details of capabilities, age, etc., to CAMBRIDGE ASPHALTE CO., LTD., Swann Road, Cambridge.

**GENERAL FOREMAN** urgently REQUIRED for bridge construction in Devon. Marine works and piling experience essential.—Please send full details to MARPLES, RIDGWAY AND PARTNERS, LTD., 2 Lygon Place, Victoria, London, S.W.1.

**SITE ENGINEERS REQUIRED** for building contracts, multi-storey concrete framed buildings. Good salary for men with initiative.—Apply in writing, stating age and experience, to M. J. GLEESON (CONTRACTORS), LTD., Hareton House, London Road, North Cheam, Surrey.

**PLANNING ENGINEERS REQUIRED** for the planning department of civil engineers, with good site experience in building and civil engineering work, and with some planning experience, to be employed in connection with the company's projects in the London area. Excellent prospects; pension scheme. Apply, stating qualifications, experience, and salary required, to M. J. GLEESON (CONTRACTORS), LTD., Hareton House, London Road, North Cheam, Surrey.

**SITE ENGINEER/SURVEYOR, Tunnels.**—Full particulars in writing to LEONARD FAIRCLOUGH, Lionel Street, Birmingham.

**ASSISTANT TRANSPORT MANAGER REQUIRED.** A North London. Large tipping fleet. Modern amenities. Good prospects for energetic, intelligent man.—Write, stating full personal particulars and experience, to Box V.2159, "The Contract Journal."

**AGENT/GENERAL FOREMAN REQUIRED** to take charge of road contracts in the Peterborough area. Must be conversant with setting-out and use of dumpy level.—Apply, stating experience and salary required, to HENRY J. FIRMEN, LTD., Newark Road, Peterborough.

**TARMACADAM PLANT MANAGER REQUIRED** for plant sited in Southern Counties. Must be conversant with manufacture to all B.S. Specifications: administrative and organising experience necessary. Please reply, stating age, experience, and salary required. All replies treated in strict confidence. Present staff notified.—Write Box V.2161, "The Contract Journal."

**A FITTER REQUIRED,** London area, to be fully experienced in complete overhaul of all types of contractors' plant.—Write, stating previous experience, rate of pay required, etc., to Box V.2153, "The Contract Journal."

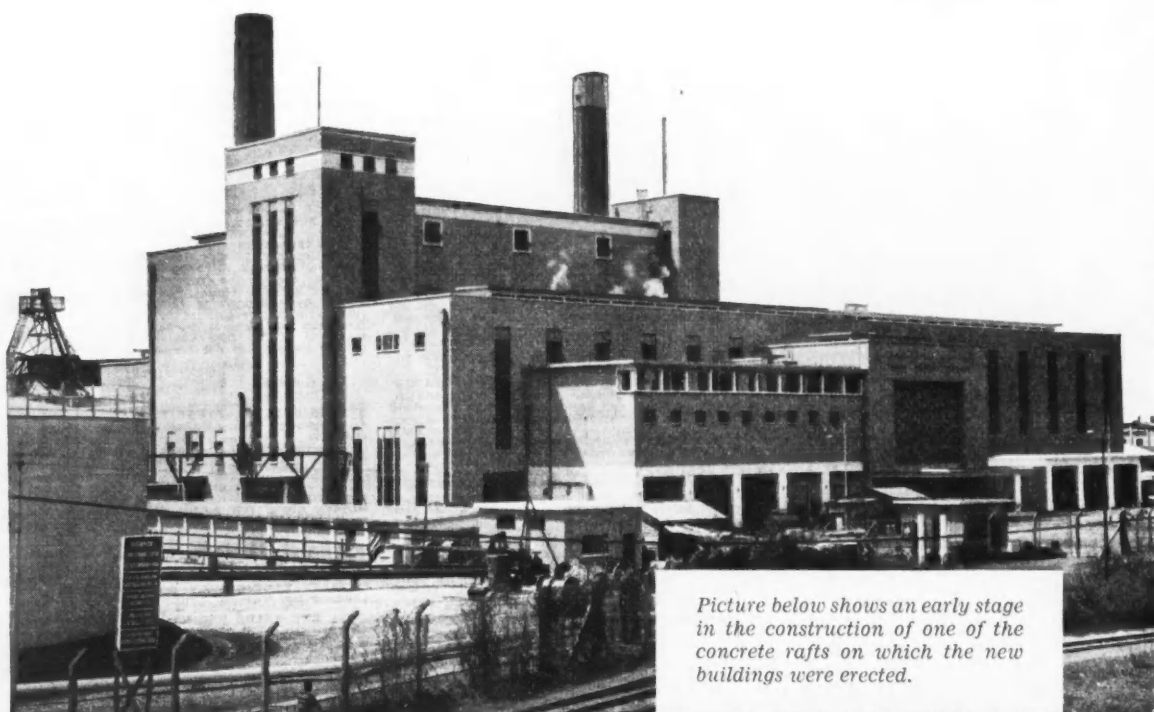
**CASHIERS and TIMEKEEPERS REQUIRED** by large firm of public works contractors, for contracts in London and Provinces.—Write, stating age, experience, and salary required, to Box V.2155, "The Contract Journal."

**EXCAVATOR DRIVER REQUIRED,** Weymouth area. For a modern Priestman Wolf Excavator. The applicant must be efficient in the use of the machine and capable of site repairs and maintenance. Full W.R.A. conditions and overtime. Experienced men only, please.—LEONARD FISHER, LTD., Somerset House, Chard, Somerset.

**SENIOR and ASSISTANT QUANTITY SURVEYORS.** Applications are invited for the above positions in the first instance for a major contract in South Wales and then on permanent staff of national firm building and civil engineering contractors in the north-western area. A good salary with other staff conditions and security will be offered.—Applications should state age, qualifications, training, past and present experience, which will be in strict confidence, and should be addressed to Box V.2170, "The Contract Journal."

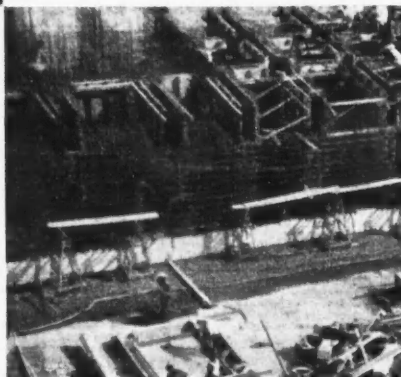
*MORE POWER FOR THE POWER HOUSE*

## IJORA EXTENSION is Costain built!



*Consulting Engineers: COODE AND PARTNERS.*

Richard Costain Ltd. have now erected an extension to the power station at Ijora, Nigeria, which was built by them. The extension includes a new turbine house, boiler house, and other works. As in the original project, because of the nature of the site, a feature of the extension has been the construction of three large, independent and buoyant rafts of re-inforced concrete to support the new buildings. The experience, technical ability and resources brought to this contract are available for every Costain client.



*Richard*  
**COSTAIN**  
*Limited*

**It's never too soon to call in**

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# THE CONTRACT JOURNAL

INCORPORATING  
THE BRITISH CONSTRUCTIONAL ENGINEER AND THE CONTRACTOR

## THE CONTRACT JOURNAL

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and  
THE CONTRACTOR  
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LAWRENCE MCCARTHY

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### Advertisements

Advertisement rates may be obtained on application to R. Binfield, Advertisement Manager.

## THE SHORTAGE OF REINFORCING RODS

THE history of reinforcing rod supplies is not a happy one. In general the past 10 years have been marked by recurring shortages. The year 1950 started off well but difficulties emerged in 1951 mainly as a result of the re-armament programme, and continued into 1952; 1953 and most of 1954 saw the mills working below capacity and the discontinuance of imports, but by the end of 1954 another serious shortage had developed and imports were again necessary in 1955. Difficulties remained throughout 1956, but 1957 and 1958 were relatively good years, at least from the users' point of view. However, following an upsurge of building work of all types, delivery periods again lengthened and reached six months or more by the end of 1959.

The position today, according to all reports, is pretty grim. Nine or 12 months is about the shortest delivery period that can be obtained; on many occasions it is 15 months or more. As in earlier years, it is the smaller sizes that are the most difficult to obtain.

A further worry for contractors is a tendency for architects and engineers to introduce a clause into the contract that tenders must be submitted on the understanding that adequate steel supplies are available. If the contractor is thrown back on Continental steel this often means an increase in costs and a tricky calculation on a firm-price tender.

The use of reinforced concrete as a method of construction is still increasing in Great Britain. It is doubtful if this trend has been fully taken into account in the estimates of future demand that have been made from time to time. At any rate, demand in 1959, particularly in the latter part, seems to have completely outstripped the earlier estimates. It is a fact, too, that Great Britain still lags behind the majority of European countries in its usage of reinforcing rods. But to dwell on the past is no remedy for the future.

What can be done to alleviate the present acute shortage and to eliminate this two-year cycle of glut and shortage? Contractors can make a contribution themselves. They can avoid fragmentation of delivery schedules; advance ordering, accompanied by full details of sizes and tonnage is essential to smooth production. It would help, too, if specifications were consolidated as between different sizes, showing the destination of each batch.

The problem, however, goes much deeper than these considerations. Most rolling mills roll various types of finished products and in the past it has been impossible to avoid the impression that contracting has been regarded as a "cinderella" industry by the steel producers; its needs are to be considered after many others have been satisfied. The fact that consumption of reinforcing rods by the contracting industry rose from about 250,000 tons in 1950 to about 450,000 tons in 1959 suggests that far from starving this market the producers could very profitably develop it, even if this means that they have, on occasion, to hold expensive stocks of finished products as well as billets.

Finally, the Government cannot escape responsibility. A legitimate complaint of the producers is the frequent changes that take place in the level of the overall construction programme. It is the old story so familiar in the case of bricks and other materials and the construction industry itself. Cuts in construction work damp down the demand for rods: stocks are run down and an increase in activity results in almost immediate shortages. The two-year cycle is not confined to reinforcing rods but is reflected throughout the whole range of constructional activity and its allied processes.

The users can do much to improve the present reinforcing rod position by giving longer notice of their requirements. The producers can do even more, by increased production and by seeing that contracting gets a more generous share of the available supplies. The final solution, however, must await the day when the planners cease to tamper with the free flow of building and civil engineering work.

## MINISTRY ANNOUNCES £2M. MEDWAY BRIDGE CONTRACT

### Journal's Exclusive Report Confirmed

**F**OLLOWING the exclusive report in *The Contract Journal* last Thursday, a Ministry of Transport announcement has confirmed that the Medway Bridge is to be constructed by J. L. Kier and Co., Ltd., in association with Christiani and Nielsen, Ltd. The contract is valued at £2,325,931, and work is to start shortly.

The bridge, with its approach viaducts and their abutments, will be nearly two-thirds of a mile long (3,270ft.) with a central span of 500ft. The span will be 100ft. above the water. Two additional river spans—one on each side of the centre span—give the bridge itself a total length of 1,125ft. The western approach viaduct will have 11 spans and the eastern viaduct seven, making 21 spans in all. In addition

tracks and footways will be paved with mastic asphalt to ensure complete waterproofing of the structure.

The contract just awarded also includes the construction of two road bridges over the railway lines from Sole Street to Rochester on the west bank of the Medway.

The bridge has been designed by Freeman, Fox and Partners, acting as consulting engineers to the Ministry, and they will also be responsible for the supervision of the contract, which will take about 2½ years to complete.

#### Technical Details

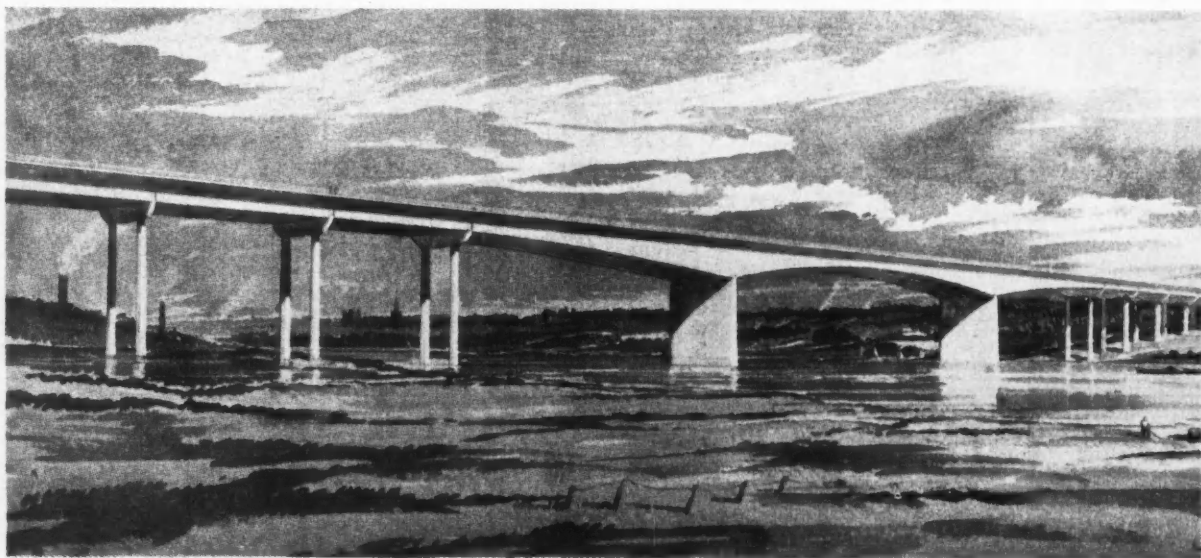
The two main piers of the bridge will consist of hollow reinforced concrete shafts built on mass concrete. To provide the foundations, excavation inside sheet steel

Very accurate assessments will have to be made of the deflections from dead load during erection, particularly that of the main spans. Shrinkage and "creep" of concrete will have to be taken into account, as well as all the plant and erection gear, to make sure that the final levels are correct and that the necessary movement for variations of temperature can take place.

#### Motorway Project

Award of the contract represents the start of the carefully phased works on M.2, the most important motorway project in south-eastern England.

Leaving A.2 on the London side of Strood, this 25-mile road will by-pass to the south Rochester, Chatham, Sittingbourne and Faversham. Near Faversham,



Artist's impression of the completed bridge

to the motorway's two carriageways, the bridge will also carry separate cycle tracks and footways.

#### Largest Prestressed Span

The bridge itself will be an outstanding example of prestressed concrete engineering. Compared with its main span of 500ft., the next largest in the world is the Coblenz Bridge over the Moselle which has a main span of 403ft.; this was completed in 1954. The previous largest was that over the Rhine at Worms, built in 1953 with a main span of 375ft.

Many difficult engineering problems are involved in the construction work. To cause the least possible obstruction to river traffic, girders will be erected across the river on the cantilever principle, using the minimum amount of temporary staging. The concrete will be cast as construction proceeds, specially designed formwork being used which, together with essential plant, will be moved forward on steel or aluminium travelling cages.

In the earlier stages of the contract, suitable weather conditions will be of particular importance, because of the heavy plant and temporary works needed for piling and foundations.

Carriageways, hard shoulders, cycle

piled cofferdams will have to be taken down some 50ft. below high water to reach the chalk bedrock. After the massive concrete foundations are brought above water level, the comparatively slender cellular reinforced concrete piers will provide the seatings from which the main span and side anchor spans will be cantilevered outwards in both directions.

The superstructure will consist of independent twin bridges, the side spans being extended into the main span by 200ft. long cantilevers, which will support a 100ft. suspended central span. The overall depth of the girders will be about 35ft. at the river piers and eight feet at the centre of the navigation span.

Both the anchor and cantilever spans will be of cellular construction. The suspended span of each of the twin bridges will consist of four precast prestressed concrete beams weighing up to 95 tons each. These will support a reinforced concrete deck slab cast in position.

The 2,145ft. approach viaducts will consist of reinforced concrete slabs cast on top of precast prestressed concrete beams weighing up to 185 tons each. These will be supported by reinforced concrete portal piers founded on piles or on spread footings.

the motorway will rejoin the existing route to Canterbury, Dover, Folkestone and other Kent coastal resorts.

Work on M.2 itself will begin later, says the Ministry.

#### WELSH CONTRACTORS' FILM SHOW

The South Wales and Monmouthshire Section of the Federation of Civil Engineering Contractors recently arranged a showing of constructional films at the Angel Hotel, Cardiff. Over 150 attended, including representatives of Government Departments, local authorities, and consulting engineers.

Mr. Ronald Horrocks, J.P., vice-chairman of the Section, presided, and the films were introduced by Mr. T. Leslie Lowe, chairman of the Section's Public Relations Sub-committee.

The films were: "Motorway"—the story of the M.1; "Pipeline Construction"—the uses of the most modern techniques and equipment in laying a cross-country pipeline; "Rivers of Life"—Usk reservoir and Weirwood reservoir.

# LAND CRISIS IN THE HOUSE-BUILDING INDUSTRY

## N.F.B.T.E. Report Calls for Immediate Action

AT the very time when it is the Government's policy to encourage home-ownership, and when the house-building industry has the capacity to meet the growing public demand, there is a rapidly deteriorating supply of that one essential commodity—land scheduled for house-building—according to a report prepared by a Working Party of the National Federation of Building Trades Employers and recently submitted to Mr. Henry Brooke, Minister of Housing and Local Government.

"If evidence is required to support this statement," say the Working Party in their report, "there is no need to look further than the unprecedented sums now being paid at auctions for any land for building where there is the slightest prospect of planning permission forthcoming. Eight, ten and even fifteen thousand pounds are being paid for an acre of land near even moderately prosperous industrial towns: plot costs of £800 without road, sewer and other services are not unusual even where eight to 10 houses per acre are being built. In some areas land scheduled for house-building has ceased to exist.

"Nor is there any sign that the demand for houses and consequently the demand for land will subside. We believe it to be no exaggeration to describe the present situation as one of crisis demanding immediate action, not for the selfish interests of house-builders but for the community at large—and in fact to safeguard the avowed policy of the present Government."

The Working Party state that the effective long-term solution requires a complete re-appraisal of land use between the many, often conflicting, demands for it. They continue:

Such a re-appraisal itself calls for considerable research and will not be forthcoming quickly. It should, however, be put into effect immediately if there is to be any hope of avoiding continually recurring crises.

### Short-term Proposals

In the meantime short-term measures which can be put into effect under the existing system of planning control are necessary to relieve the present critical situation. Since it is the shortage of land allocated for housing which is responsible for this situation the only effective remedy is the immediate revision of development plans. It will be too late to wait till the second review of development plans for an increased allocation of land for housing. Less than half the planning authorities have as yet submitted their first five yearly reviews and indeed some authorities are not due to do so for some years.

It is accordingly suggested that all planning authorities should be advised to re-examine immediately the housing situation in their area with a view to zoning additional areas of land for housing at the earliest possible date and that the consideration of such amendments to development plans should be given priority at the Ministry.

It is appreciated that this may appear to involve an increase in the work falling on planning authorities and the Ministry, but this would be offset by the decline in the planning applications and appeals to build on land not zoned for building and by the reduction in the danger to proper planning involved in day-to-day decisions as to whether housing can be permitted in unzoned areas.

To ensure that the best possible use is made both of any land already allocated and not yet developed for housing and of

new land released for housing it is also suggested that great care should be taken to avoid imposing density standards that do not permit the most satisfactory and economic use of the land.

In addition there are a number of supplementary measures outlined below which might to some small extent assist in easing the situation until long-term measures become effective.

### Second Stage Development

When development plans were submitted planning authorities were asked to distinguish between development likely to take place in the first years of the 20-year period covered by the plan, and subsequently.

It is suggested that local planning authorities should be advised that, where this has not already been done, land zoned for housing but reserved for second stage development should, if suitable, be made available immediately.

### Land Held by Local Authorities

In 1952 and subsequently the Ministry of Housing advised local authorities against securing land owned by house-builders for development. There have, however, been instances where land owned by house-builders has subsequently been acquired compulsorily.

Prudent house-builders naturally prefer to have planning permission before completing negotiations to buy land. Unfortunately application for planning permission draws attention to the fact that certain areas of land are available and there have been complaints that such applications have been followed by immediate action by local authorities to acquire the land compulsorily.

Some of the land allocated for housing may be in the possession of local authorities who have bought it by agreement or compulsion, but have not developed it.

It is suggested that local authorities:

- be asked not to acquire compulsorily land which builders are in the course of negotiating to purchase and for which they have sought planning permission;
- be reminded not to acquire land held by house-builders for development;
- be recommended to sell land which they hold for housing and have no plans to develop in the reasonably near future to house-builders who are prepared to build houses immediately.

### Green Belt

The need for green belts round industrial areas is not disputed, but some areas have been included in a green belt merely because they were odd pieces of land that happened not to have been built on when the first planning map was drawn up. It has, for example, happened that the development of land having the necessary services and approved after the introduction of the 1947 Act as suitable housing, had to be deferred because of the difficulty of obtaining building licences. This land has since been included in a green belt and permission to build houses refused.

While it is agreed that any substantial outward extension of existing towns and villages in green belts should in general be discouraged, it is pointed out that they are unlikely to survive as healthy living communities unless a certain amount of new building is allowed to prevent obsolescence and cater for the natural increase in population.

It is suggested:

- that more favourable consideration

should be given to applications to build houses on the fringes of green belts where the land is suitable for building and not an essential part of the green belt and the necessary services are available;

- that more latitude might be allowed on infilling existing villages and towns in green belts.

### Redevelopment

Local planning authorities have the power to define areas as comprehensive development areas. Local authorities may acquire such land compulsorily, clear it and develop it themselves or, after clearance, offer the land to private enterprise for sale or lease. Where it is intended that these comprehensive development areas should include residential areas, private enterprise is willing and able to participate in redevelopment projects.

It is suggested that where local authorities do acquire land for comprehensive redevelopment including housing, a greater opportunity should be given to house-builders to participate.

We appreciate that some of our suggestions might conflict with the original conceptions of those responsible for drawing up the development plans; we also appreciate that some conflict at present exists between planning authorities themselves. With an impending crisis it is necessary however to face facts. In doing so we believe that we are voicing the opinion not only of the house-building industry but also of a very large section of the community who are progressively finding it more difficult to buy a home of their own.

### 3,500,000 TONS LESS OPENCAST COAL IN 1959

The National Coal Board's policy of running down opencast contracts as quickly as existing contracts permit resulted in an opencast output in 1959 of 10,800,000 tons or 3,500,000 tons less than in 1958. Profits fell from £8.2m. to £3.9m.

The Board state in their recently published annual report that while the loss of profit was severe the effect on the deep mines of fall in demand was lessened.

Nine new shafts were completed in 1959 bringing the total sunk since vesting date to 44. Work was in progress on 14 new shafts, and a further 16 shafts were being deepened or widened. Total shaft sinking completed by the Board by the end of 1959 amounted to 79,500ft. in depth, and 15,700ft. remained to be sunk in shafts under construction.

The two shafts at Parkside colliery, completed early in 1959, were sunk at the highest rate ever recorded in Great Britain. The average speeds of sinking were 172ft. and 167.7ft. a month. Over a depth of 1,800ft. each shaft was excavated at average speeds of over 245ft. a month.

Tunnelling has also improved, due to better training of labour, the application of method study techniques, and better methods of mechanical tunnelling. The fastest rate of advance up to the end of 1958 (64yd. in one week at Tower Colliery in the South Western Division) was exceeded at three tunnels in 1959. An advance of 107yd. in seven days was attained in 1959 at Bank Hall Colliery in North Western Division.

Capital expenditure by the Board in 1959 amounted to £112m., £8m. more than in 1958. Of this, £100m. was spent on collieries and the rest on ancillary activities. Expenditure on major colliery schemes accounted for £63m.

# A LAWYER CONSIDERS . . .

## The Meaning of "Hand-Rails" — Water Charges

**A**N interesting case in the Court of Appeal, *Corn v Weir's Glass, etc., Ltd.* [(1960) 2 All E.R. 300], has just been reported and concerns the interpretation of the Building (Safety, Health and Welfare) Regulations.

The facts were that a glazier, C, was coming down the stairs of a building in the course of erection carrying a sheet of plate glass 5ft. by 2ft. 6in. He was holding it in the crook of his right arm and using his left arm to steady it. The stairs were 5ft. 6in. wide in two flights with a half-landing in between. The upper flight was open to the hall below on one side but hugged the wall on the other; the lower flight was of seven stairs set at an angle to the wall and was thus open on both sides; no rail at all was fitted on these two flights of stairs. When C got to the half-landing he nearly fell but when he started to descend the lower flight a gust of wind from an open window above the landing caught the glass and upset C's balance. He fell from the fourth or fifth stair up, a distance of some two or three feet, and was injured. He sued his employers for breach of their statutory duty under the Building Safety Regulations.

By Regulation 27 (1) it is laid down that, "Stairs shall be provided throughout their length with hand-rails or other efficient means to prevent the fall of persons except for the time and to the extent necessary for the access of persons or the movement of materials. If necessary to prevent danger to any person the hand-rails shall be continued beyond the ends of the stairs." The Court of Appeal had little difficulty in finding that the employers were in breach of this Regulation. The only way they could have avoided this finding would have been to show that the absence of a hand-rail was reasonably necessary as a practical matter to get materials and/or men up and down the stairs. The evidence did not support such an argument and the Court of Appeal could not see that the presence of hand-rails would have created any practical difficulty for skilled men carrying equipment, etc., upstairs.

The contractors, admitting their breach, then argued that this breach was not the cause of C's fall. In other words, they were saying that even if they had complied with this Regulation such compliance would not have prevented C's fall. To combat this defence C's counsel referred to Regulation 27 (2). This states that "guard-rails of adequate strength" must be provided on all gangways, runs and stairs down to a height 6ft. 6in. from the floor or ground. Now of course the contractors had not provided guard-rails but as the place from which C fell was less than 6ft. 6in. from the ground there was no obligation on the contractors to have provided guard-rails on that portion of the stairs. C's counsel then tried to argue that, while undoubtedly under Regulation 27 (1) a hand-rail ought to have been provided for the whole length of the stairs, then the hand-rail must be in lieu of a guard-rail for that portion where the provision of guard-rails is not obligatory, i.e., where the fall is less than 6ft. 6in.

The Court then investigated the meaning of "hand-rails" and "guard-rails" in this Regulation. In their view "guard-rails" means "rails of such a character as will provide a physical barrier against the possibility of falling over the side" and moreover Regulation 27 (2) clearly contemplates several guard-rails for it refers in subparagraph (b) to the "lowest" guard-rail. They then considered the meaning of "hand-rails": "A hand-rail—which is not required by Regulation 27 (1) to be of any particular strength—connotes to my mind a rail that can be gripped by hand. Such a rail need not necessarily act as a physical barrier; it need only be such a rail as

will enable any person, by gripping it, to steady himself against falling. There is no requirement that the hand-rail prescribed shall be fixed on the open side of the stairs." These being the meanings the Court gave to the two types of rails, they therefore felt that, in the Building Safety Regulations, there was a substantial difference between the two; indeed if a hand-rail had been intended to serve the same purpose as a guard-rail Regulation 27 (2) need not have been worded to cover stairs since Regulation 27 (1) would alone have been sufficient. Moreover the Court was not to be persuaded to alter its view that the two types of rail referred to were essentially different by reference to the Factories Act, 1937, S.25 (2) which might seem to lend support to the opposite view; on the wording of the Regulations the Court was clear that the two types of rail were different.

Having decided, therefore, that the only obligation on the contractors was to provide a hand-rail on the portion of the stairs where C fell, it became clear on the facts that even if such a hand-rail had been provided C would still have fallen; after all he had no free hand with which to grasp a hand-rail. Only if hand-rail meant the same as guard-rail would C's fall have been prevented by compliance with the Regulations; but the Court of course had decided against this. C's claim therefore failed; his accident was not the result of the contractors' breach of the Regulations.

Two other points of interest emerge from the Court's judgments in this case. C's counsel argued that under Regulation 27 (1) the employer must provide a hand-rail "or other efficient means to prevent the fall of persons" and that these latter words imposed a duty on the employers to fit something which would prevent a fall like C's. The Court, however, applied the rule of interpretation known as the "eiusdem generis rule" to these words, that is they said the words must be construed by reference to the meaning of hand-rails and the words therefore meant "neither more nor less than some form of alternative device that will serve in lieu of a hand-rail . . . something that will prevent a fall in the same way and to the like extent as a hand-rail would." As this method of drafting is fairly common in the Regulations it is important for contractors to know the sort of meaning that Courts will be likely to put on words like the ones quoted and considered in this case.

The other point of interest concerns some comments by Lord Justice Devlin whose opinions always carry great weight. He agreed that in this type of case, where the employee is alleging a breach of statutory duty, the employee has to show that on balance of probabilities the breach of duty caused or materially contributed to his injury. In other words the employee has to show that "if before the accident the regulation had been complied with his injury probably would not have occurred." The Lord Justice then went on to add that if there were, as is quite usual, more ways than one of complying with a regulation it is not open to the employer in defending a claim to say that he would have, or had in fact, chosen a method of compliance which would not have saved the employee from the accident which has occurred; he must choose, or will be held to be under an obligation to choose, that method of complying with a regulation which "gives the greatest protection and benefit to his workmen." On this case however Lord Justice Devlin was satisfied that however the employers had complied with Regulation 27 (1) this accident would still have occurred.

**O**NE of the minor, but annoying, irritations of contracting, especially for

those whose business is fairly widespread, is the lack of uniformity in the basis of charging for water used in constructional contracts. Of course it is realised that for some water undertakings the cost of supplying water must be greater than for other undertakings because of insuperable natural differences and difficulties. Even allowing for this, there still remains an astonishing variety in methods of charging; some undertakings refuse a metered supply, other will grant it on request; some refuse to omit dry trades when charging on contract value, others make some allowance; some charge a flat rate per house, others attempt to equate charges to actual consumption. This variety also extends to the actual charges made and meter rates and contract value rates vary well beyond what might be expected from differences in the basic cost of producing a supply of water.

It is therefore good news that the whole question of water charges is to be reviewed by a sub-committee of the Minister of Housing and Local Government's Central Advisory Water Committee. It is hoped that the construction industries will supply evidence and try to obtain, as a minimum requirement, that a metered supply must be granted if the contractor so requests subject, if necessary to protect the water undertaking, to a minimum consumption charge.

However, in the nature of government inquiries, any such desirable changes must take time. But few contractors seem to realise that they can do something now to combat unfair charges. By the Water Act, 1945, S.27, water undertakers must grant to non-domestic users in their area a supply of water "on reasonable terms and conditions." If the terms and conditions on which water is to be supplied seem to a contractor to be unreasonable he has the right to appeal to the Minister of Housing and Local Government. The Minister cannot, and this is most important, hear any appeal after a contract for a supply of water has been entered into with a water undertaking; he cannot adjudicate on contract terms that are legally binding. Contractors must therefore appeal *before* making a firm contract for water to be supplied. Of course, if the supply is needed urgently, this course is not possible. But in these circumstances the contractor should enter into the contract but at the same time notify the water undertaking that he is doing so under protest at the charges and/or the conditions imposed by the undertaking.

The actual appeal to the Minister needs to be no more than a letter from the contractor to the Ministry in Whitehall complaining that the charges and/or conditions imposed are unreasonable and stating that, if the contract has been entered into, it has been under protest at the charges and conditions. The Ministry will then get to work to investigate the matter. It is not thought that this investigation will cause very much work and upset to the contractor. If more contractors took advantage of S.27 there might well be a greater readiness on the part of some undertakings to meet contractors' reasonable demands as to conditions and charges for water supply.

### SCOTTISH ROAD IMPROVEMENTS

A total of 18 road schemes costing over £100,000 were started in Scotland during 1959-60. Ten relating to trunk routes and a further eight affecting classified roads were started in the year ended March 31, 1960.

The target completion dates and details, including cost, of these schemes are charted in "See How They Go—Scotland," which is issued annually by the British Road Federation.

## CORNWALL WATER SCHEME COMPLETED

### Porth Reservoir to Contain 114,000,000 Gallons

**D**ESIGNED to cope with the large summer population of Newquay, Cornwall, the completed Porth reservoir and its associated works were officially opened last week for The Newquay and District Water Comany.

The scheme has included the construction of the Porth reservoir itself; development of the Rialton treatment and pumping station to double the output; covering of the Coswarth service reservoir; and laying of a 12in. trunk main from Rialton to feed Coswarth.

An unusual feature of the new works is the use of the existing stream between the dam and the treatment works to deliver water for purification. As the reservoir is more than a mile upstream of the works, the capital saving in the cost of a main to deliver the water to the works is considerable. A further advantage is that the amount of compensation water which would otherwise have flowed to the sea has been more than halved. The compensation flow from the dam is 350,000 g.p.d., and downstream of the intake at the Rialton station it is 120,000 g.p.d. The balance of 230,000 g.p.d. can therefore, if necessary, be taken into supply. There is, in addition, a considerable build up in the stream flow between the dam and the intake from springs in the bed of the stream. This water would have been lost had the flow from the reservoir been piped.

At the same time, minor adjustments in the distribution system in Newquay have been made to obtain the full benefits of the increased output from Rialton, and further adjustments will be made as found necessary when the plant is in full operation.

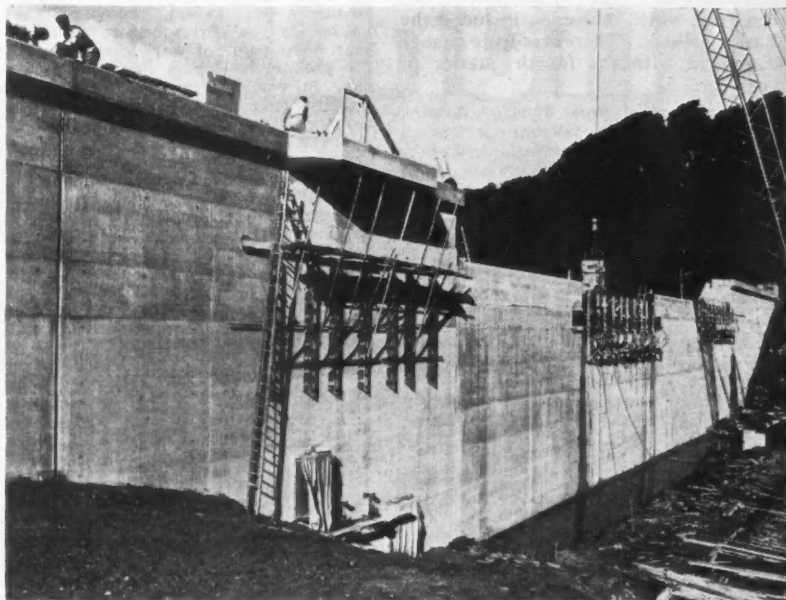
#### Dam Construction

The dam for the Porth reservoir is situated on the River Porth about three miles from Newquay and about one mile above the Rialton intake and treatment works. The catchment area draining to the reservoir is about 5,500 acres, the water area of the reservoir at spillway level is 38.3 acres, and the capacity at that level is 114,000,000 gallons.

With a total length of 438ft. below ground, above ground the dam is 363ft. long, the spillway section being 131ft. in length. This spillway extends to a height of 30ft. above the river bed and the footway on either side is 5ft. 6in. above the spillway.

The dam is founded generally on hard

suitable foundation was exposed. Even at this depth the rock appeared to have a low shear resistance along the bedding planes and it was considered desirable to strengthen the rock. For this purpose holes were bored to a depth of 10ft. in the rock underlying the spillway section and about three tons of cement injected.

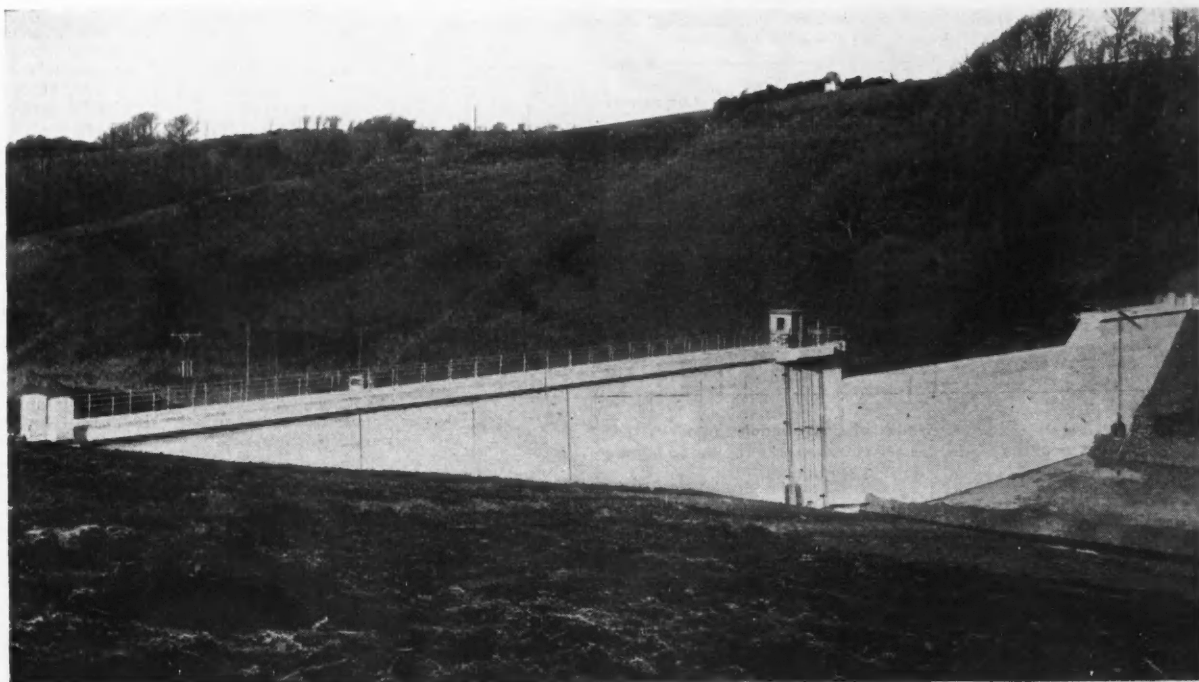


The dam nearing completion

shillet rock at a depth of about 15ft. below the surface of the ground, rather deeper than expected. Soft excavation to an average depth of 6ft. 6in. was removed to reveal rock of a flaky nature at a steep angle of dip with pockets of decomposed material, and this rock had to be removed before a

To ensure water tightness of the rock foundations, holes spaced at about 8ft. intervals on the axis of the dam were drilled into the rock to a depth of 40ft. below the cut-off trench and 28 tons of cement were injected under pressure.

(Concluded on next page)



Completed dam upstream face

## CONSTRUCTIONAL WORK VALUED AT £500M. IN FIRST QUARTER

### New Orders Continue Upward Trend

CONTRACTORS in Great Britain carried out constructional work to the value of £500m. during the first quarter of 1960, according to provisional figures collected by the Ministry of Works (see table below). This was £36m. more than in the same period last year, which, however, included the Easter holiday. There was little change compared with the fourth quarter of last year.

The amount of work done on housing for public authorities fell but the upward trend in housing for private developers continued. There was virtually no change in the amount of work done (other than housing) for public authorities and work on industrial building remained steady.

Miscellaneous building fell for the first time for a year.

In April employment (allowing for seasonal adjustments) was at about the same level as it reached at the end of last year.

Orders for new work obtained by contractors in the first quarter of the year amounted to £478m., compared with £402m. in the corresponding period last year. The value of work coming forward for private developers has continued to rise; in particular orders for industrial building have increased considerably this quarter. Work, other than housing, for public authorities has also increased this quarter; the figures include a number of large jobs, notably contracts for railway electrification, the Bristol-Birmingham Motorway and the duplication of the Blackwall Tunnel.

#### CONSTRUCTION IN GREAT BRITAIN Value of Work Done by Contractors (at Current Prices)

	1st Qtr.	1959 4th Qtr.	1960 1st Qtr.
<b>New Housing</b>			
For Public Authorities	59	62	59
For Private Developers	73	88	89
Housing Total	132	150	148
<b>Other New Work</b>			
For Public Authorities	104	108	105
For Private Developers			
Industrial	69	72	72
Miscellaneous	52	59	56
Other New Work Total	225	239	233
Total All New Work	357	389	381
Repair and Maintenance	107	120	119
Grand Total	464	509	500

#### Operatives Employed by Contractors

	1959 April	Jan.	1960 April
New Housing	282	281	287
Other New Work	445	431	440
Repair and Maintenance	323	332	336
Total	1,050	1,044	1,063

Note: Insured operatives aged 15 years and over, excluding administrative, technical and clerical workers and self-employed operatives.

#### Value of New Orders Obtained by Contractors

	1st Qtr.	1959 4th Qtr.	1960 1st Qtr.
<b>New Housing</b>			
For Public Authorities	72	61	62
For Private Developers	118	115	132
Housing Total	190	176	194
<b>Other New Work</b>			
For Public Authorities	101	121	137
For Private Developers			
Industrial	55	68	80
Miscellaneous	56	60	67
Other New Work Total	212	249	284
Total All New Work	402	425	478

#### Index of Construction Costs

The index numbers of the cost of new construction are as follows:  
1954=100

1st Qtr.	1959 4th Qtr.	1960 1st Qtr.
113	113	113

#### Index of Production

Changes in the volume of work done are shown in the official index of industrial production. The index numbers for construction are as follows:

1st Qtr.	1959 4th Qtr.	1960 1st Qtr.
106	115	114

(Concluded from previous page)

The concrete of the dam was constructed in 11 sections, the spillway sections 32ft. 9in. in length and the remainder 40ft. Joints between these sections were sealed by rubber expansion joints.

Approximately 16 acres of the reservoir area were wooded and the trees and growth were cleared to leave a 20ft margin should the water rise to 3ft. above the spillway level.

#### Water Treatment

At Rialton the existing building was extended, incorporating a 100,000 gallon filter water tank under the floor, and the additional filters were constructed between the new pump house and the sedimentation tank. Both old and new buildings, the former in brick and the latter in concrete block, were plastered externally and sprayed in Tyrolean finish to merge the old building with the new one. The intake in the river was reconstructed to give a backflow to the rough screens, and a self-acting dam gate maintains the height of water at the intake. A fish pass was also included in the intake works to the specification of the Cornwall River Board, together with the compensation water gauge.

Treatment is by coagulation, with sedimentation and settlement in a horizontal flow sedimentation tank, followed by rapid gravity filtration. Provision is made for double coagulation with sodium aluminate in the event of a grossly discoloured crude water. The filters deliver into the clear water tank under the floor of the pump room, where the water receives lime treatment for final pH correction. Chlorination of the crude water prior to filtration is supplemented as necessary by chlorination of the filtrate. Low lift pumps deliver the crude water to the sedimentation tank, and the new high lift pumps consist of three Harland Electroglide vertical spindle pumps, each delivering 30,000 g.p.h. approximately.

The Coswarth service reservoir, capacity 3,000,000 gallons, is an earth banked puddle-cored rectangular reservoir, with concrete over brick lining. This has been covered with a slab roof on precast reinforced concrete beams and pillars.

When the new 12in. trunk main was laid, it was decided to use Tyton jointed pipe, although a main as big as this had not previously been laid in Cornwall with this type of joint. This proved to be both satisfactory and economic in cost.

In addition to the Porth works, some of the gravity stations in the Indian Queens area are being retained on grounds of economy, together with the Toldish station which provides a bulk supply to St. Austell R.D.C. The gravity supplies and surplus Toldish water will all be treated by pressure filtration and delivered direct to the Coswarth service reservoir.

#### Consultants and Contractors

The consulting engineers for the scheme were Edward Sandeman, Kennard and Partners, 171 Victoria Street, London, S.W.1. Mr. L. Broughton is the chief engineer to The Newquay and District Water Company.

Principal contractors for the various works were as follow: construction of dam—E. Thomas and Co., Ltd., Falmouth; covering of Coswarth reservoir—Rogers and Christian, Ltd., Newquay; construction work at Rialton—J. Garrett and Son, Ltd., Plymouth; filtration plant at Rialton—The Candy Filter Co., Ltd., London; pumping plant at Rialton—Harland Engineering Co., Ltd., Alloa; pipework—Staveley Iron and Chemical Co., Ltd., Chesterfield.

Road Note No. 25, produced by the Road Research Laboratory of the D.S.I.R., deals with "Sources of White and Coloured Aggregates in Great Britain (1959)."

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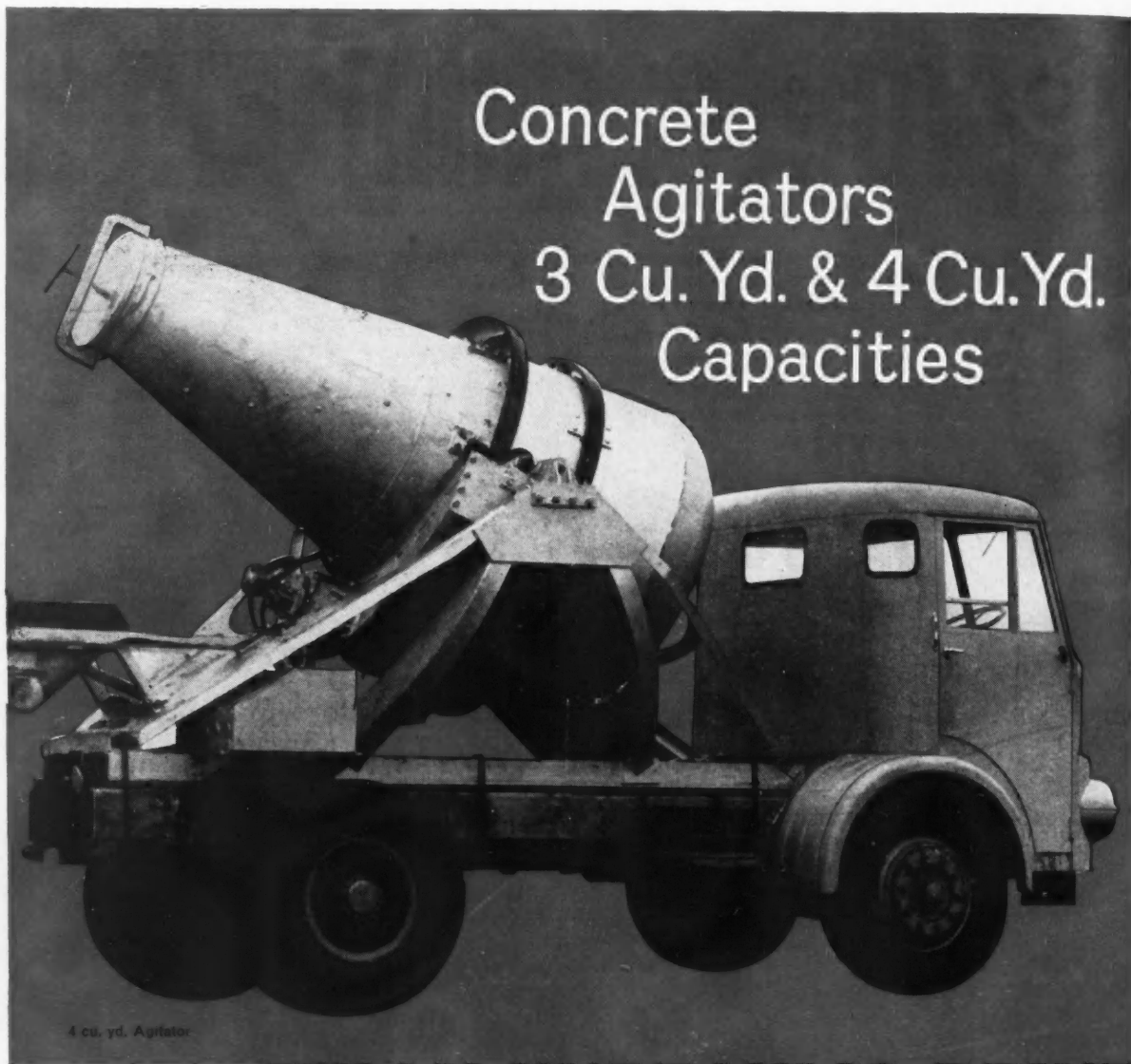
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# MAIN DRAINAGE OF BLACKPOOL

## £2,860,000 Improvement Scheme\*

FOR the purpose of drainage, the borough of Blackpool is divided into five areas, namely the Northern, Gynn, Central, Eastern and Southern Areas. Drainage is generally by the combined system and the sewage is discharged to the sea on the ebb tide after screening.

Five screening stations deal with the flow before discharge, and dry weather flow is all passed through drum screens having 3in. diameter holes in the peripheral plates. Wet weather flow is screened by bar-screens which are mechanically raked. Screenings are disintegrated, and are either removed by tank wagon to drying beds or returned to flow.

### Northern Area

The main trunk sewers which are 6ft. 3in. by 6ft. 3in. and 8ft. 6in. by 8ft. 6in. discharge the combined dry weather flow and storm water of the area to a pumping and screening station at Anchorsholme.

The Anchorsholme station can deal with a maximum flow of 165,000 gals./min. or 435 cusecs. Drum and raking screens are provided, and the main pumping plant consists of five vertical spindle axial flow pumps. The station is situated beneath the Promenade.

Discharge from the station can be effected in three ways—by gravity through the 42in. outfall (constructed 1936-1939 and extending some 600yd.) by pumping through the same outfall, and by pumping on to the foreshore. This sequence of operations is used according to the volume of sewage to be dealt with and the level of the tide at the time.

Schemes totalling £90,000 in value are in hand or projected, for providing branch sewers to serve extensive residential development which is taking place within this area.

### Gynn Area

This is a small area, extending from Warbreck Hill in the East to Gynn Square in the West, and is bounded by the Northern and Central Areas. It is the only area capable of drainage by gravity at all states of the tide and pumping is not necessary. The run off is screened prior to discharge by two drum screens. The screening station, which is situated beneath the Promenade, was completely reconstructed in 1953 by direct labour at a cost of £45,000.

Work to the value of £16,000 is at present in hand in providing sewers to relieve local flooding in this area.

### Southern Area

The main trunk sewer is 6ft. 9in. by 5ft. 3in. and 7ft. 3in. by 7ft. 3in. discharging to Lennox Gate pumping station. The capacity of this station is 75,000 gals./min. (200 cusecs.) and discharge is through a 66in. diameter rising main to a 6ft. by 4ft. 9in. culvert which in turn is connected to a tidal chamber and the 48in. diameter sea outfall at Harrowside. Two other small pumping stations serve the area. The work carried out in the Southern Area between 1936 and 1939 cost in the region of £317,000.

The sewers in the Southern Area have been extended post-war by the first section of a drainage scheme for Marton Moss, at a cost of £28,000. The second stage of this scheme has been approved by the Council at an estimated cost of £70,000.

\*Extract from Paper, "Municipal Works of Blackpool, 1960," by K. A. Kershaw, chief assistant engineer, C. W. Hale, resident engineer, and A. G. Beckett, chief assistant (architectural services), prepared for the annual conference of the Institution of Municipal Engineers held recently in Blackpool.

### Central and Eastern Areas

These combined areas cover the older and more densely developed parts of the borough, and the drainage system has been in existence with very little improvement since the early part of the century. The watershed of the Central Area is to the west, and the outlet is through the pumping and screening station at Manchester Square. The watershed of the Eastern Area is towards Marton Mere in the east, and under the present system, up to 6 x D.W.F. drains against the natural watershed into the Central Area. Run off in excess of 6 D.W.F. is discharged via storm overflows to Marton Mere.

Four pumping stations serve the area, the main one being at Manchester Square, and having a capacity of 288,000 gals./min. (770 cusecs.).

Discharge to sea at Manchester Square is effected through two 36in. diameter outfalls which extend some 900yd. seawards.

Extensive flooding has taken place in these areas over a number of years, and schemes have been approved for improving the drainage of these areas as follows:

Scheme	Estimated Cost
Eastern Area	
New Interceptor Sewers ...	£440,000
Central Area	
Central Interceptor	
Lytham Road Sewer ... }	£1,450,000
Central Drive Trunk ... }	
Pumping Stations	
Reconstruction of Manchester Square Pumping Station (including provision of new conveniences) ...	£400,000
Outfalls	
Dry weather flow outfall }	£570,000
Wet weather flow outfall }	
	£2,860,000

The Eastern Area Scheme is at present under construction and the remaining schemes are at various stages of design.

### Eastern Area Scheme

(a) *Design Considerations.* The basis of the design is to divide the existing trunk sewers into such lengths that they become adequate to deal with their associated drainage areas and to connect them to the new interceptor sewers. A carrier sewer is provided beneath Reads Avenue to convey the run off from the Eastern Area into the existing trunk sewers in the Central Area.

In the first instance, it was considered satisfactory to calculate the run off from the Ministry of Health Standard Storm Curve. However, the occurrence during the past four years of five storms of intensity considerably in excess of the Ministry storm, caused second thoughts on this matter.

After much consideration, it was decided that the trunk sewer should be designed to accommodate, when running

full, a storm of intensity equal to  $t+4$  inches/hour for times of concentration up to 20 minutes duration or  $t+22$  inches/hour for times over 20 minutes duration. This, it is considered, will guarantee unsurpassed conditions in the trunk sewers even during the heaviest of storms.

The lengths of the trunk sewer are as follows:

108in. dia. ...	49yd.
96in. dia. ...	1,152yd.
72in. dia. ...	919yd.
54in. dia. ...	1,084yd.
42in. dia. ...	118yd.

(b) *Form of Construction.* Boreholes were taken along the proposed lines of the trunk sewers to ascertain the ground's

suitability for tunnelling, and three working shafts were sunk by direct labour to supplement the information obtained from the bores. The ground in the area is generally clay, containing pockets of water-bearing sand.

The opportunity was taken in sinking the shafts to experiment with different forms of shaft construction. One shaft was sunk, using precast concrete bolted segments, and two using in-situ concrete cast in a suitable circular double shutter at ground level. The "in-situ concrete" shafts proved considerably cheaper to construct and were specified for the contract.

A number of forms of tunnel construction were considered in addition to precast concrete bolted segments. The disadvantage of the bolted segments is the necessity to provide some form of secondary lining. Most of the other forms of construction had to be rejected however, due to cost, or to the nature of the ground. One satisfactory alternative form of construction was, however, forthcoming, and that was a solid interlocking precast concrete segment. It was decided eventually to let contractors tender for the work on the basis of using either the solid interlocking segments or the standard bolted segments lined with 3in. in-situ concrete.

(c) *The Contract.* Tenders were invited on a lump sum fixed-price basis from a selected list of contractors. The contract provides for variations, but these are taken into account by additions or reductions to the contract price, the bulk of the works not being subject to measurement.

The contract commenced December, 1959, and the time for completion is 65 weeks. The contractor elected to use standard bolted segments for the 108in., 96in. and 72in. diameter sewers, and the solid interlocking segments for the 54in. diameter sewers.

It is anticipated that compressed air working will be necessary on the 108in. diameter sewer and on part of the 96in. diameter sewer.

### Central Area Scheme

(a) *Sewers.* The same storm curve as that used for the Eastern Area has been adopted for calculating the run off. As most of the work will be in town centre and at a reasonable depth, it is anticipated that the sewers will be constructed in tunnel. A ground exploration contract has just been completed to verify the suitability of the ground for tunnelling.

(b) *Pumping Stations.* It is proposed that Rigby Road and Ansdell Road pumping stations be dispensed with and that Manchester Square pumping station be reconstructed as a dual level pumping station to deal with the total flow from the Central and Eastern Areas.

The existing pumping station at Manchester Square is an underground structure, part of which was constructed some 50 or more years ago. This part of the station contains a pumping capacity of 400 cusecs., i.e., five pumps operated by d.c. motors. Some of the plant is very old and the whole of this part of the station is obsolescent. An extension was constructed in 1936 and this incorporated modern screening sections and further pumping capacity of 330 cusecs.

It is proposed that the 1936 extension be retained entirely without alteration and the original part of the station be reconstructed to provide for two additional screens and modern a.c. operated pumping plant. It is further proposed that an extension be constructed to deal with the low level flow and replace the Rigby Road and Ansdell Road stations. This will have its own screening plant and pumps.

(Concluded on next page)

## OPERATIVES' PRESIDENT CRITICISES CIVIL ENGINEERING WAGE SETTLEMENT

ANYTHING similar to the civil engineering industry's wage settlement—whereby the 40 hours can be worked in 5½ days—should not be agreed to by the building industry's negotiators, Mr. J. H. Mills, president, told the recent annual conference of the National Federation of Building Trades Operatives.

"The 40-hour 5½-day week," he said, "was an obligatory arrangement whereas the 40-hour 5-day week was a permissive one dependent entirely on the employer's decision."

From this it could be seen that four hours could be worked on Saturday at ordinary time rate and the period noon to 4 p.m. at time-and-a-half; whereas in a five-day week Saturday morning work for the first four hours carried time-and-a-half and thence double time. The rule was specific in its terms. It read "the working hours in the industry shall generally be . . ." and then followed the prescription of 40 hours from Monday to Saturday. The rule went on "It shall be open to the employer to work a five-day working week. . . ."

"Our task in the building industry to achieve a shorter working week continues," said Mr. Mills. "A shorter working week is fast becoming an established fact in industry generally and I can only regret that our industry is so far behind in its contribution to industrial progress, especially as we were in the vanguard with the 44-hour week when it was established in 1920."

"This year," he continued, "we shall arrive at a 44-hour uniform week throughout the country as a preliminary step. I hope the next step is not very far ahead; but for this the negotiators must rely on the support of the members and there can be no evidence of that support while there is an obvious predilection for overtime—as much of it as possible. It would, however, be wrong to mix the hours and wages issues. Each must be settled on its own

merits, but let us first consolidate the wages position."

Turning to the subject of accident prevention, the president stated that some progress had been made, chiefly by the promulgation of draft regulations in the construction industry as a whole, but far too numerous accidents and fatalities continued to occur.

"What we most earnestly desire," he said, "are regulations leaving the minimum number of escape loopholes, and this the present draft manifestly does not do. It would be a matter of argument whether or not loopholes are desirable where income tax payment is concerned but there should be no dispute whatever about the desirability of effective protection of life and limb."

He hoped that it might be possible in the future for the Trade Union and Labour Movement to establish a combined special department to deal with "this blot on our society" and that consideration would also be given to the establishment of a special overriding department of Government to cover the whole field of accidents, industrial, domestic and road, not limited in its activities by Treasury control.

### Apprenticeships

Mr. Mills said that he was sorry to state that the number of apprenticeships at the end of 1959 had declined by nearly 3,400 compared with a year earlier, although the completion certificates issued in 1959 exceeded those issued in 1958 by 380. Of the 12 classes listed in the National Joint Council's annual report, only two trades showed a small increase over 1958, the plumbing trade having two more than the previous year and the glazing trade having four more.

The Employers' and Operatives' Federations were doing whatever was possible to encourage and develop apprenticeship, and he hoped that their combined efforts would prove justified before long.

Mr. Mills said that his reference was to

indentured apprenticeship; the still substantial portion of apprentices not indentured was a cause of anxiety to those who were seeking to end the unsatisfactory position. The latest Ministry of Works analysis showed that in 1959 43.5 per cent. were engaged under verbal agreement and 56.5 per cent. under written indenture. There was, he thought, room for a good bit of wholesale propaganda in this connection.

## CEMENT INDUSTRY'S 1959 ACCIDENT REPORT

In spite of an increase in the number of accidents in the cement industry during 1959, the frequency rate remained the same as that for the preceding year. This is stated in the report for 1959 of the Accident Prevention Advisory Committee of the Cement Makers' Federation.

The year 1958, says the report, had given the cement industry its best record to date for accident prevention, when the industry had almost achieved the frequency rate of 1.00 which had been set as its first target. 1959 looked in the first few months as if it were going to be better, but the results show another near miss, 1.01 again. There is no cause for reproach, for despite an increase of over 1,000,000 in the man-hours worked, the increase in the number of accidents, from 254 to 266, was not disproportionately large.

In 1956 the total number of accidents in the industry was 410, giving a frequency rate of 1.45, and in 1957 there were 332 accidents, the rate being 1.21.

## PARKING CONVENTION

The Institution of Municipal Engineers are to hold a one-day convention on "The Problem of Car-parking" at the Caxton Hall, Westminster, on October 6, 1960. Mr. John Hay, M.P., Joint Parliamentary Secretary, Ministry of Transport, is to open the convention and address the delegates.

It is also the intention to hold an exhibition of models of car parking schemes and other items of special interest simultaneously with the convention.

(Concluded from previous page)

The reconstructed station which will be entirely underground will have a capacity of approximately 1,500 cu-secs., almost double that of the present station. New underground public conveniences to replace those situated above the existing pumping station and which are out-dated will be constructed adjacent to the new pumping station. It is anticipated that work on the conveniences will commence in the autumn and on the pumping station next year.

(c) *Outfalls.* New outfalls are necessary due to the age and condition of the existing ones and to reduce the number of times that discharge on to the foreshore takes place. It is proposed to limit discharge onto the foreshore to the two or three worst storms of each year.

A marine survey is currently being carried out to determine the length of the outfalls and the period of discharge. Floats are being released at points half a mile, three-quarters of a mile and one mile from the sea wall along the line of the proposed outfalls, and their tracks plotted. It is considered that floats can be unreliable, due to the effect of wind, and in order to be able to place a correct interpretation on the float results, measurements of the direction and speed of the underwater currents at 6ft. intervals of depth are simultaneously being taken. This is achieved by a simple device known as a "Jelly Air Bottle." The apparatus consists of an infants feeding bottle of half-pint capacity made of heat resisting glass. It is six-sided and has a wide aperture neck and is closed by a threaded brass cap

with an eye fixed to the exterior. One side of the bottle is graduated in ounces.

The method of use is to pour into the bottle four ounces of hot gelatine solution and insert a simple compass, consisting of a graduated piece of metal which floats in the gelatine. The bottle is sealed and fastened to line and sinker by means of a polythene bracket and cod line at the required point to take the bottle to the desired depth. The line sinker and bottle are then lowered into the water from the anchored boat. The air in the bottle tends to make it rise vertically from its anchorage but the current tends to pull it horizontally and it takes up an angled position in the direction of the current. After 10 or 15 minutes the jelly sets and the bottle can be recovered. The direction of the current is indicated by the compass which has set in the jelly and the speed is determined from the angle at which the jelly has set. Bacteriological analyses of the sea water are being carried out by the medical officer of health over a lengthy period, and these will be examined to attempt to establish a relationship between length of outfall, period of discharge and degree of pollution.

It is anticipated that the above Central Area Drainage Scheme will be constructed during the next five years.

Other works recently completed in the Central Area include a culvert at Rigby Road to relieve a bottleneck in the trunk sewers approaching Manchester Square, and the installation of standby generator at the Manchester Square pumping station.

The culvert at Rigby Road is a reinforced concrete box culvert 9ft. by 5ft.

supported on 14in. diameter bored piles. The bottleneck in the system existed where two sewers passed under the railway bridge at Rigby Road and the new culvert had to be constructed between the bridge abutments with limited headroom. The cost of this work was £13,300.

The installation of the standby generator at Manchester Square was brought about by the occurrence of two or three minor power failures over the past few years. The installation just completed at a cost of £2,500 automatically closes all the penstocks to the station and brings the lighting onto the standby supply in the event of a mains failure. The standby lighting is available within 15 seconds of the mains failure. This equipment will be retained in the reconstructed station.

### Further Drainage Considerations

On completion of the Eastern and Central Area schemes, the borough will have a modern and adequate trunk sewer system. Further schemes will still be required to provide adequate branches for future development, and to relieve any remaining areas of flooding and these will be carried out as and when required.

On the pumping station side the present nine stations will be reduced to six. Manchester Square will eventually be the only manned station, and there will be five automatic stations—Anchorsholme, Lennox Gate, Gynn Square, Harrowside Bridge and South Park Drive. The five automatic stations will be connected by landline to Manchester Square and any fault developing at an automatic station will be indicated at Manchester Square.

## STEPPED SEA WALL CONSTRUCTED IN NORTH WALES



Construction in progress

**N**EW sea defence works to prevent both flooding and erosion, and consisting of a reinforced concrete stepped wall 4,600ft. in length, were inaugurated recently for Prestatyn Urban Council.

Prestatyn is fully exposed to the Irish Sea, and the fetch of 100 miles allied to winds of gale force suggests a theoretical open sea wave height of 16ft. This decreases on approaching the shelving foreshore so that a height of 8ft. from trough to crest, or 5.8ft. above still water, is thought a reasonable maximum wave height for defence purposes.

The consulting engineers recommended that the necessary protection should take the form of a reinforced concrete stepped

wall, founded on counterforts, and surmounted by a 20ft. wide slab with a wave wall on the landward side and a series of groynes. This type of design would effectively dissipate wave energy, and would afford good protection to the filling under and behind the wall.

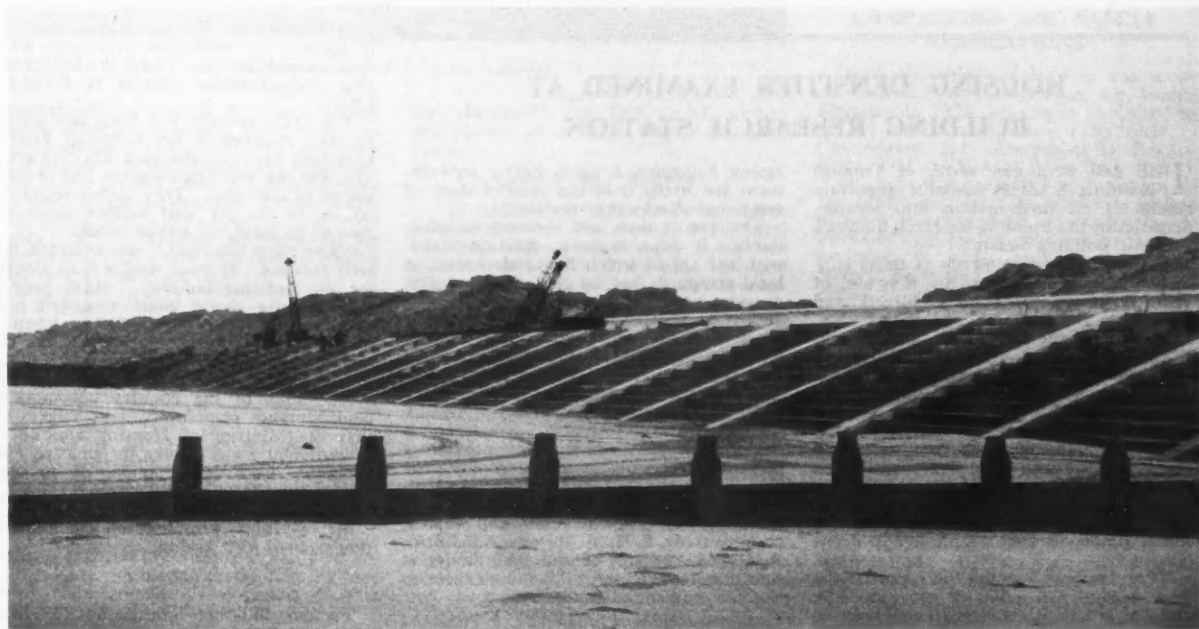
To obviate access difficulties, the wall was constructed simultaneously from either end. All operations had to be carefully phased with the tides, and about half the work had to be carried out tidally. This included driving the sheet piling and excavating for and constructing the counterforts, as well as placing and compacting, filling and constructing most of the wall.

Drainage pipes through the toe beams overcame the problem of seepage pressures during the placing of blinding concrete under the wall. Another difficulty lay in

the setting-out, as the pegs tended to shift with movements of the beach. Therefore, when enough of the wall had been constructed, the base lines at either end were transferred to the completed structure, giving a final error of 2½in. in the 4,600ft. length, which was rectified by adjusting 10 bay lengths by ¼in. each.

An average labour force of 70 men was employed, and during the contract 20,500 cu. yd. of concrete, 430 tons of steel sheet piling and 475 tons of mild steel reinforcement were incorporated in the works. The approximate cost of the complete scheme was £280,000.

Scott and Wilson, Kirkpatrick and Partners, 47 Victoria Street, London, S.W.1, were the consulting engineers, and the contractors were A. E. Farr, Ltd., Westbury, Wilts.



Part of the 4,600ft. long seawall

*Institute of Sewage Purification*

## RESEARCH INTO SLUDGE DISPOSAL PROBLEMS URGENT, SAYS PRESIDENT

**D**ELIVERING his presidential address at the annual conference of the Institute of Sewage Purification in Scarborough on Tuesday, Mr. M. ARNOLD KERSHAW, F.C.S., F.Inst.P.H.E., said that perhaps nowhere was research more needed than into the problems of sludge disposal. He had been led to the conclusion that in some measure there had been a failure to the community in neglecting to tackle in a purposeful manner the question of the complete treatment and economic disposal of sludge. Sewage, even with industrial wastes, could now be treated to almost any degree required, but this very success had aggravated the already difficult problem of complete sludge disposal.

He criticised the common statement, in describing sewage works, of "sludge disposal by drying beds." That was not a method of sludge disposal but only a stage. The only complete disposal was the distribution direct to land of digested sludge as a manure, but he admitted that many difficulties were to be encountered in its use.

### Serious Difficulties

Land was daily becoming more scarce, and he deplored that in remodelling sewage works land held for that purpose had often been disposed of for other uses. That policy was short-sighted, and he suggested that a review of the general position concerning sludge disposal would reveal that very few sewage treatment departments could truthfully claim that their sludge disposal facilities were satisfactory. Many new plants had, from their commencing operation, been faced with serious difficulties relating to sludge disposal, and it was fundamentally wrong to accept this as a perpetual problem.

He then reviewed the present methods of sludge disposal available, and concluded by stating that the need for large-scale research into the problem was urgent, for if rivers were to become wholesome at all times greater quantities of polluting matter must be removed from the waste waters

reaching them, and that matter, as sludge, must be disposed of satisfactorily.

Mr. Kershaw opened his address with a tribute to the pioneering spirit of the men who, in 1901, founded the Association of Managers of Sewage Disposal Works and forced to the public notice the importance of sewage treatment as an integral part of the public health service. That Association, since 1932 the Institute of Sewage Purification, was now fully recognised as a leading authority on all problems of sewage and trade effluent treatment.

Concerning trade effluents he referred to the guidance and assistance members had provided to local authorities in solving the many problems arising from the introduction of new industrial processes. He regarded the formation of the Trade Effluents Sub-committee of the Central Water Advisory Committee as the most important step forward in this field since the war, and said its recommendations, if acted upon, would establish a great advance in the effective control of industrial effluents.

### Importance of Management Training

Mr. Kershaw spoke of the need for the adequate training of younger members in management in addition to the technical side of sewage treatment, and welcomed the inclusion in the Institute's examination syllabus of a section on that subject. Such a broad subject as sewage treatment required managers of works to have a breadth of vision, and local authorities would be best served by such managers in complete charge of their departments, responsible directly to the councils. And, in discussing training, he advocated the spending by design engineers of at least a year working on a sewage works, learning the operational duties: that should lead to future works being designed in a more trouble-free manner.

Finally, in heralding the 60th year of the Institute's life, he welcomed the broadening of membership to encompass all those in many different professions who were in their various ways concerned with the focal point of all the Institute's activities—the protection of the rivers of this country from pollution.

## HOUSING DENSITIES EXAMINED AT BUILDING RESEARCH STATION

**T**HE first in a new series of Tropical Building Studies\* contains important results of an investigation into housing densities by the Building Research Station's Tropical Building Section.

Although aimed primarily at those concerned with housing overseas, it is also of value to town planners, architects and builders in the United Kingdom.

In studying the problem of housing densities, the research workers have set out to provide a better understanding of its significance in the physical development of a community. They stress the importance of dissociating population density from the quality of living conditions, and point out that while bad living conditions can result from lack of light, air and sunshine or from overcrowding in terms of physical closeness, they do not necessarily follow simply because people live in dense conditions.

"For example," states the report, "the high densities of 1,500 persons per acre and upward in Hong Kong's new housing developments may not be ideal; but in the harsh light of local circumstances they represent, because of the use of multi-

storey buildings, a much better environment for living than the squalid slum of congested shacks they replace."

The report does not recommend standards. It does, however, provide a tool with the aid of which better decisions on local standards can be made. It contains a wide range of data, including tables, graphs and diagrams, showing the effect on housing area densities of variations in any one or more of the different basic factors involved. It also includes a selection of photographs, illustrating many different types of housing area.

The primary object of the new Tropical Building Studies series is to provide a more widely available source of information on matters of technical interest to those concerned with the many aspects of building in tropical and sub-tropical countries. Mr. P. H. M. Stevens, A.R.I.B.A., A.M.T.P.I., author of the first study, is now Town and Country Planning Officer to the Government of Barbados.

\*Tropical Building Studies No. 1. Published for the Department of Scientific and Industrial Research by H.M.S.O. 10s. net; by post 10s. 6d. (U.S.A. 1\$ 80c.).

## MARKET VALUES OF LAND AT "RIDICULOUS LEVELS"

F.M.B. Annual Report

**"W**HILE the desire of many county planning authorities to preserve their Green Belt areas and to control new housing development and building generally is fully appreciated, the practical issues which builders and their potential clients have to face are also considerations of urgent importance," state the National Council of the Federation of Master Builders in their annual report for 1959.

"So long as houses and other buildings are required, land must be made available," say the council. "Already, owing to the refusal of planning permissions and to delays in the granting of permissions, market values of land have risen to ridiculous levels."

In their review of the past year the council state that requirements for firm-prices for building works became general, and resulted in a considerable easement in the preparation of accounts. However, with the renewal of increased wage claims and subsequent awards, they have requested the authorities concerned to reconsider a price fluctuation clause relative to labour costs.

### Direct Labour

On the subject of direct labour the council draw attention to an upward trend in some parts of the country, saying: "It is evident that political factors influence the operation of direct labour forces; it is our contention that local authorities should not be permitted to trade in competition with free enterprise, particularly since experience shows that such tenders as the local authority puts in for its direct labour force are never carrying a fair or appropriate share of overhead expenses."

### Apprenticeship

Reporting a "useful increase in the indenturing of apprentices under the industry's schemes during the last period reviewed," the council say that this undoubtedly reflects a greater measure of confidence on the part of employers who, at present, have full programmes of work in prospect.

The latter factor, they add, is of vital importance to the whole question of training young craftsmen, and in particular for the medium sized and smaller firms who undertake the larger burden in this respect.

### Annual Luncheon

Preceding their annual general meeting in London last week, the Federation held their annual luncheon under the chairmanship of vice-president, Mr. R. W. Ricketts, J.P.

The guest speaker was Lord Balfour of Inchrye, member of the board of British European Airways, who said that civil aviation and the building industry had certain things in common. They both needed to go up in the air and neither went up enough to meet the public needs.

"The sky's the limit" was a slogan for civil aviation. It must soon be the slogan for the building industry. Many people flew because roads were congested and slow, but the plight of the building industry was worse. Many people had to live up high because there was no room for them to live on the ground.

He spoke of the country becoming a land starved community and suggested that the Minister of Housing and Local Government must "move imaginatively in sweeping away great hunks of present governmental and local government restrictions on high-building."

Mr. T. Riley, president of the Federation's north-west region, responded.

Factory Building Studies No. 5—Sites and Foundations—has been published for the Building Research Station by H.M.S.O., price 3s.

## NORTHAMPTON BUILDING DESIGNED FOR BANK CLEARING DEPARTMENT

**N**EW premises to handle branch clearing, and designed to provide flexibility, were opened last week at Dallington Fields, Northampton, for Barclays Bank, Ltd.

Situated on the boundary between a new housing estate and an area of modern factory development, with a consequent good combination of amenity and public services, the premises consist of a two-storey entrance pavilion, a three-storey office block, a single-storey link block canteen, a single-storey kitchen and garage block and a two-storey caretaker's house, with a total superficial area of 27,200 sq. ft.

The two-storey entrance pavilion, comprising manager's office, secretary's and receptionist's offices, and waiting space, is entered by precast terrazzo open tread staircase with balustrade over an ornamental fish pond and fountain. This building is of load-bearing brick construction faced in red brick facings with reinforced

and roof are of ribbed reinforced concrete construction with expanded metal coffers, the latter covered with asphalt and finished with Derbyshire spar.

Windows are of metal frame construction, and staircases, with the No. 1 passenger lift, are finished with reinforced concrete terrazzo. Both ground and first floors have Burgess acoustic stone enamelled suspended tile ceilings, concealed fluorescent lighting and thermoplastic patterned floor tiles.

The lower ground floor, comprising storage space, boiler room, staff entrance, male and female toilets and locker space, supervisor's office, rest room, coffee servery and recreational space, has various types of floor finishes including quarry tiles, terrazzo, cork, hardwood strip flooring. Of load-bearing brick construction faced in Windsor hand-made grey facings, the penthouse has a timber joisted roof covered with wood-wool slabs and finished

the contemporary manner in I.C.I. paint with wallpaper panels, Spreylux paint and white glazed wall tiling being used in the toilet, locker room and kitchen area. Window surrounds are in precast reconstructed stone and the internal sills in precast terrazzo.

Joinery is mainly in hardwood, special features being the use of hardwood curtain walling in the recreational space and the bridge connecting the entrance pavilion to the main block. The heating is by oil-fired boiler with radiators on all floors, and ventilation is provided to the lower ground floor locker rooms and to the dining room and kitchen areas.

### Consultants and Contractors

The architects for the building, which was planned in conjunction with Barclays Bank Premises Department, were Green, Lloyd and Sons, London, S.W.1; the consulting engineers were Considere Constructions, Ltd., London, S.W.1; and the quantity surveyors, Reynolds and Young, London, W.C.1. Bernard Sunley and Sons, Ltd., Northampton, were the main contractors.

Among the principal sub-contractors were the following: glazing and metal windows—Aygee, Ltd.; painting—Alfred Bagnall and Sons, Ltd.; quarry tile paving, wall tiling—Bryon and Co., Ltd.; Timinium roof covering—Builder's Iron and Zincwork, Ltd.; fencing—D. Chapman and Sons; Spreylux wall finish—Daly and Son; Burgess acoustic tiles—Draftsele, Ltd.; gas installation—East Midlands Gas Board; electrical installation—Electrical Installations, Ltd.; heating and hot water installation—Ellis (Kensington), Ltd.; tennis courts—En-Tout-Cas Co., Ltd.; hardwood flooring—Hollis Bros., Ltd.; lifts—Keighley Lifts, Ltd.; terrazzo paving—Malacarp Terrazzo Co., Ltd.; roof tiling—The Marley Tile Co., Ltd.; plastering—L. Routhorn and Co., Ltd.; asphalt and felt roofing, tarmacadam paving—Scudamore and Luck, Ltd.; thermoplastic paving, cork tiling—Semtex, Ltd.; plumbing—Bernard Sunley and Sons, Ltd.; joinery—Bernard Sunley and Sons, Ltd. (Joinery Division); lightning conductors—A. N. Wallis and Co., Ltd.

### COMPRESSED AIR SAFETY REGULATIONS

Draft regulations, extending the scope of the Work in Compressed Air Special Regulations, 1958, have been published by the Ministry of Labour (The Work in Compressed Air (Amendments) Regulations, 1960, H.M.S.O., price 2d.).

By these draft regulations, the scope of the 1958 code, which at present is limited to work in compressed air carried out in works of engineering construction, will be extended to cover such work in any factory, premises, processes, operations or places to which the Factories Act, 1937, applies.

### 1961 BUILDING EXHIBITION

The 1961 Building Exhibition will take place at Olympia, London, from November 15-29.

The organisers are continuing to re-plan the Exhibition and contractors' plant and equipment will appear as a more homogeneous section. As the final details are still being incorporated in the plan bookings will not start until early September, it is stated. A certain priority will be given to those firms which have exhibited for a number of years previously and a list has been opened for new prospective exhibitors.

The organisers are The Building Exhibition, 11 Manchester Square, London, W.1.



A general view of the main building

concrete lower ground floor and hollow block suspended ground floor, and the steel-framed, timber-covered, pyramid-shaped roof is finished with Timinium. The lower ground floor has been utilised for fuel storage space and a cycle store, the whole being connected to the main office block at ground floor level by an in-situ concrete bridge with curtain walling and board Timinium roof.

### Main Block

Of reinforced concrete frame construction, the main block, with a penthouse above, has solid brick walls faced to ground floor level in red facing bricks and above in Windsor hand-made grey facings. It has two main floors, each of them with 5,450 sq. ft. of open space; these have been deliberately kept free of partitions, and supporting columns kept to a minimum, to ensure flexibility and free flow of work.

Only one of the two floors is at present in use, and the other floor is ready to accommodate the branch credit clearing at a later stage in the development of this separate service.

The lower ground floor is of reinforced concrete and the ground floor of hollow block construction, while the first floor

with Derbyshire spar built-up felt roofing and serves as a toilet block and tank house.

### Canteen and Kitchen

The canteen is a single-storey brick building faced in red facings with metal windows, timber roof trusses, wood-wool slabs finished with Timinium, Unistone rilled acoustic boarded ceiling and thermoplastic floor tiles.

A kitchen and garage block comprises kitchen, wash-up, preparation rooms and stores, staff canteen, manageress's office, three garages, changing rooms and toilets. It is of red facing brick construction with timber joisted roof covered in Derbyshire spar chippings. Floor finishings, depending on area, are thermoplastic tile, quarry tiles or granolithic concrete with a concrete trowelled finish to the garages.

The caretaker's three-bedroomed detached house is of traditional red brick construction with pitched roof covered with pantiles, dormer windows, board and joisted timber first floor, hardwood strip and thermoplastic ground floor.

External brick walls throughout the whole construction are in Flying Flemish bond, and internal walls and ceilings generally are plastered and decorated in

## INTERNATIONAL CONGRESS ON PRECAST CONCRETE

**T**HE Third International Congress of the Precast Concrete Industry was held recently in Stockholm, when a thousand participants from 20 different countries, including Britain, attended.

Director E. Tunhammar, Sweden, president of the Congress, presided at the opening in the St. Erik's Hall in the presence of members of the Government, representatives of the authorities and different branches of industry.

The first working day started with a series of scientific reports and lectures on the shrinkage of concrete. Professor George Wästlund was chairman for this session, and the general report was submitted by Austria.

The rapid development in the field of plastics has caused scientists and research workers to investigate the possibilities of combining plastic material and concrete for the protection of concrete pipes against aggressive materials, and a Spanish report surveyed how far the work in this field had proceeded. The new developments in the application of vibration techniques in the precast concrete industry are of great practical value, and details of these were contained in an interesting general report from the United Kingdom.

The production of concrete units for building is naturally of particular interest at present and a general report on this subject was presented by Denmark. There were also reports on developments in the field of precast concrete construction which have been made in other countries.

### Exhibition

The International Exhibition of the Precast Concrete Industry—"BIM 60"—which is directly connected with the International Congress, covered an area of 2,000 sq. metres in the St. Erik's Hall and 10,000 sq. metres on the exhibition area outside the Hall.

## R.I.B.A. PRESIDENT ATTACKS LAND SPECULATORS

Opening the British Architects' conference in Manchester last week the president of the R.I.B.A., Mr. Basil Spence, said:

"Our land has become a casino for the speculators, who are now clamouring to build in the green belts that surround our cities—less, one suspects, because they really want to solve the housing problem, than because there is a fortune to be made if the Minister of Housing and Local Government can be persuaded (and I hope he never will be) to relax his defences.

"Like the profiteers who corner the bread supply in a besieged city, the speculators are cornering the limited supply of building land in town and country and holding the community up to ransom. The money that should be going into better architecture and higher standards is being taken by people who have contributed nothing to the building process.

"This has grown to the dimensions of a public scandal, and threatens to make good planning and city reconstruction prohibitively expensive. I sympathise with builders who find it increasingly difficult to build, but we must harness their skill and resources to the building of new towns and the renewal of old ones, and prevent the continued outward sprawl over the countryside."

## COLLOQUIUM ON PRECAST SHELLS

The International Association for Shell Structures have received an invitation from Dr. Ing H. Rühle, who with the co-operation of the "Kammer der Technik" is organising a Colloquium on Precast Shells to take place at Dresden (D.D.R.) probably in the first part of November, 1960.

## MODERN BUS STATION COMPLETED AT CRAWLEY

**A** NEW bus station, with glass-fronted waiting room for passengers and modern inquiry offices for both London Transport and Southdown bus and coach services, has been opened at Three Bridges Road, Crawley, Sussex.

The single-storey building, which forms the focal point of the station and has been designed to harmonise with the general atmosphere of the New Town, is faced in hand-made multi-coloured bricks with window surrounds of slate. A special feature is the tea terrace paved in 2ft. by 1ft. 6in. grey-green slabs with tile insets.

At the front of the building is a mono-pitched, timbered roof with cantilevered projecting "fingers" to form a covered entrance. This roof is surfaced with 24-gauge copper and the remainder of the building has flat roofs with clerestory lights to the kitchen area to give adequate ventilation as well as light. The flat roofs are finished in 3in. asphalt on "Elasticell" screed on concrete. All copings are in slate.

The building has an area of 3,000 sq. ft., and is laid out with flower beds, the external publicity panel area being paved in beach cobbles. Inside, the walls of the public rooms have been finished in coloured plastic fabric applied to the plaster walls with an adhesive, and the floors finished with lino tiles, laid to pattern. In the kitchen and other working areas, cream glazed tiles have been used on the walls with 6in. by 6in. heather brown quarry tiles for the floors.

In winter, the building will be heated by oil-fired automatic boilers, a similar smaller boiler being used for hot-water supplies the whole year round. Radiators are used in most rooms, but the glass window-wall of the tea bar and waiting room has floor-level skirting-type heating which produces a current of warm air over the glass and keeps the windows free from mist.

The building was designed under the direction of Mr. T. R. Bilbow, F.R.I.B.A., architect, London Transport. Whyatt (Builders), Ltd., London, S.W.16, were the main contractors.

## HONOUR FOR C.P.A. PRESIDENT

Mr. Harold Spragg, president of the Contractors' Plant Association, was a recipient of the C.B.E. in the recently announced Birthday Honours.

As president of the Association since its formation in 1941, Mr. Spragg has played a prominent part in safeguarding and promoting the interests of the plant hire industry in this country. In the difficult period following the war he did much to establish confidence in this industry and the Association's work, in close co-operation with the Ministry of Works and the Federation of Civil Engineering Contractors, has been an important factor in the growth of mechanisation in the construction industry in recent years.

## THE REINFORCED CONCRETE ASSOCIATION OFFICERS

At the annual general meeting of the Reinforced Concrete Association the following officers were elected: President—W. Kirby Laing (John Laing and Son, Ltd.); vice-president—A. P. Mason (British Reinforced Concrete Engineering Co., Ltd.); ordinary members (Group I, Professional)—F. G. Clarke (Clarke, Nicholls and Marcel), and H. G. Cousins; (group II, industrial)—K. H. Brittain (Associated Portland Cement Manufacturers, Ltd.); M. G. Cowlshaw (Guest, Keen and Nettlefolds (South Wales), Ltd.); and D. H. New (Holland & Hannen and Cubitts (Great Britain), Ltd.).

## Late Construction News

**GREAT OUSE SCHEME.**—The tender of Sir Lindsay Parkinson and Co., Ltd., 6 Lambeth Road, London, S.E. 1, amounting to £2,211,539, has been accepted by the Great Ouse River Board for Part III of the Fen flood protection scheme. A 27-mile cut-off channel will be constructed between Barton Mills and Denver, involving 7,000,000 cu. yd. of excavation. Also entailed in the contract is the construction of diversion channels, sluices and siphons, road bridges, footbridges, weirs, and the Wissington railway bridge. Sir M. MacDonald and Partners, 72 Victoria Street, London, S.W.1, are the consulting engineers.

**MERSEYSIDE CAR PLANT.**—Contractors for site works of the £25m. car factory to be built at Merseyside for the Ford Motor Co., Ltd., will be G. Percy Trenham, Ltd., Pangbourne, Reading. The buildings will cover 2,000,000 sq. ft. Work will begin immediately.

**FULHAM HOSPITAL EXTENSION.**—The South West Metropolitan Regional Hospital Board are inviting tenders from selected contractors for building a new pathological unit at St. Stephen's Hospital, Fulham, London, S.W.10. The architect to the Board is R. Mellor, and the quantity surveyors are Ernest R. Babbs, 187 Piccadilly, London, W.1.

**£320,000 HOUSING CONTRACT.**—John Twiname, Ltd., Brigham, near Cocker-mouth, have been awarded three contracts, totalling £320,000, by the North Eastern Housing Association. They cover the erection of 147 flats at Newcastle upon Tyne, 48 houses at Cramlington, Northumberland and 17 dwellings at Crosby, near Maryport.

**SOUTHAMPTON UNIVERSITY BUILDING.**—A short list of contractors are now preparing tenders for the erection of a hall of residence at South Stoneham House, for Southampton University. Plans are by Robert Potter and R. Hare, De Vaux House, De Vaux Place, Salisbury, Wilts.

**RIVER WORKS CONTRACT.**—Nine tenders ranging from £215,916 to £401,995 were submitted for carrying out the Birket and Fender improvement scheme for Cheshire River Board. The lowest, by J. Howard and Co., Ltd., 13 Buckingham Gate, London, S.W.1, has been accepted by the Board and work will begin in August. The contract involves a new dock wall, storm water pumping station, discharge culvert, diversion channel and control building. Sandford Fawcett and Partners, 53 Victoria Street, London, S.W.1, are the consulting engineers.

**MONMOUTHSHIRE COLLEGE.**—Tenders are due in to the Monmouthshire C.C. next month for the erection of a large extension to the Caerleon Training College. S. Leyshon is the county architect and the quantity surveyors are Davis, Belfield and Everest, 9 Ashley Place, London, S.W.1.

**DUBLIN FIRM'S CONTRACT.**—Subject to Ministry approval, Brierley Hill (Staffs.) U.D.C. are to accept the £90,832 tender of McGee Bros., Ltd., Nephin Road, Dublin, for the erection of a new assembly hall as an extension to the civic centre.

**LIVERPOOL HOUSING.**—Recent contracts for housing development by Liverpool City Council include: Two multi-storey blocks of flats at Beechwood Road, Aigburth Road—Wm. Townson, Ltd., £301,315; 95 dwellings, Childwall Valley estate—Unit Construction Co., Ltd., £164,512; and 59 dwellings and 23 garages, Higher Lane, Fazakerley—R. J. Barton and Sons, Ltd., £103,474.

**BEDFORD RING ROAD.**—Bedford B.C. have been recommended to accept the tender of Sydney Green and Sons, Ltd., at £102,250, for carrying out the first stage of an inner ring road from Newnham Avenue to Polhill Avenue, including provision of foul and surface water sewers and the culverting of a water course.

## FACTS BEHIND THE FIGURES

### Statistics on Construction

*An economist analyses the facts behind the figures in the "Statistics on Construction" booklet just published by the Federation of Civil Engineering Contractors*

**T**HE post-war years have certainly been productive of statistics. They come in bewildering quantity and variety and, because so many agencies are responsible for collecting them, it is no easy task to find all the relevant statistics about any particular industry.

Signal service has therefore been done by the Federation of Civil Engineering Contractors in bringing together in a slim volume of only 12 pages all the main statistics about the constructional industries. These statistics, drawn from many sources, have been cleverly presented to bring out comparisons and underlying trends. A study of them will reward anyone concerned with the constructional industries whether he be a contractor, a supplier of materials or plant or a Minister or Civil Servant in one of the Works Departments.

#### Output, Orders and Trends

The first six tables in the booklet deal with output, orders and future trends. In 1959 construction output rose six per cent. to a record £2,394m., although the labour force increased by only 1 or 2 per cent. New orders were also at a record level but the increase was centred in new housing and to a lesser extent commercial building.

In the case of public works and industrial construction, although orders increased they still fell substantially below output. Indeed, over the past three years industrial construction work in hand has been falling at the rate of £60m. a year so that the recent stimulus given to industrial investment has come not a moment too soon. Similarly, the order load for public works has fallen by £56m. over the past two years and these two factors undoubtedly are largely responsible for the surplus capacity and the consequent highly competitive conditions in the civil engineering sector.

Although housing has received the lion's share of a recent construction boom, a comparison with pre-war yields a rather different picture. Taking 1954 constant prices, housing output has declined from £600m. to £500m. since 1938, but non-housing output has risen from £550m. to £850m. (all in round figures). The picture that emerges is that after the 1952-54 housing boom it has been the non-housing sector that has been going ahead with increased expenditure on industrial construction, power stations, roads, railways, public health services, schools, shops and commercial premises. The growth of construction work for the distributive trades has possibly been the most spectacular of all, rising from £39m. to £227m. per annum in 10 years.

#### Labour Force

The labour side of the constructional industries is dealt with in Tables 7-10. The contractors' labour force at 1,060,000 has not yet reached the 1956 peak but has more than recovered from the effects of the credit and investment restrictions in 1958 when 25,000 men had to be laid off. Here contractors have a legitimate cause for complaint in that the direct labour departments were able to maintain their labour forces intact. It seems wrong that direct labour departments should be able to insulate themselves from the effects of national economic policies so that the whole burden is thrown upon the contractors. It is not without significance too that contractors achieve a net output per person employed over 30 per cent. higher than that achieved by direct labour.

A table analysing the contractors' labour force by occupation shows the carpenters with 150,000 operatives as the biggest single craft group followed by the painters and bricklayers. Craftsmen account for over 600,000 of the total labour force, the other 400,000 being machine operators and other plus-rated men and labourers.

Table 9 in the booklet reveals that weekly earnings in the constructional industries have increased by 100 per cent. since 1948, thus outstripping the 55 per cent. rise in prices over that period.

In 1959 the constructional industries, with 6.5 per cent. of the total civil employment lost only 2.5 per cent. of the total number of working days lost due to industrial disputes—a happy comment on the trouble-free atmosphere existing on most construction sites.

The number of fatal accidents too fell in 1959, but there were still by any standards far too many. 169 men lost their lives on building operations and a further 48 on works of engineering construction.

Costs of construction work fell two points in 1959, and now stand at 13 per cent. above 1954 despite a 27 per cent. increase in wage rates over that period.

#### Structure of Industries

Tables 14 and 15 deal with the structure of the constructional industries. The 1,000,000 operatives employed by contractors are spread among a total of some 64,000 firms (excluding "one-man firms"). Of these firms, some 30,000 are general builders employing on average just over 10 operatives each and another 30,000 are specialist trades also employing about 10 operatives each. The remainder of the industry is made up of some 4,000 civil engineering contractors and building and civil engineering contractors employing on average 100 operatives each. There are only 310 general builders employing over 100 men, of which only 10 employ over 500 men, whereas in the case of civil engineering contractors and building and civil engineering contractors, 790 firms employ over 100 men and 130 employ over 500.

By the very nature of construction work, with its unique range of operations spread over a large number of temporary sites, there seems little likelihood of the constructional industries ever becoming dominated by just a few large firms. There will always be a place for the small contractor who, with his local knowledge and lower overheads, should always prove competitive with the larger contractor for the small local job. There does, however, seem to be a tendency for the number of firms in the constructional industries to decrease and for the average size of firms to grow. The squeeze on the smaller firms can be seen from the fact that since 1951 nearly 10,000 contractors, most of them small ones, have gone out of business together with nearly 13,000 one-man firms.

#### Finance

Total profits in the constructional industries show a remarkably consistent pattern amounting (after statutory depreciation allowances) to some 6 per cent. of the wages and salaries bill. Capital expenditure is on a distinctly rising trend, having increased by 70 per cent. in real terms since 1948. Most of the expenditure is on plant and machinery and half of that on earthmoving machinery. In 1958 (the last year for which figures are available) the constructional industries spent £34m. on plant and machinery, £13m. on vehicles and £10m. on works and buildings.

Although over the years the turnover

of the constructional industries has been increasing steadily, the amount of their bank advances had until 1958 remained surprisingly constant at £60m. or £70m. Then in 1959 it suddenly shot up to over £100m. This presumably makes some contractors particularly vulnerable to any tightening of the credit squeeze.

The last two tables in the booklet deal with the financing of construction work. In the case of housing, the new emphasis on private enterprise housing is unmistakable. The share of local authority finance has fallen from over 70 per cent. in 1948 to just over 40 per cent. in 1958, whereas the amount of privately financed housing has increased from 13 per cent. to 53 per cent. over the same period.

In the case of non-housing construction, the figures are much more consistent. Persons and private companies account for nearly half the total finance and local authorities for a further quarter. Central government and public corporations between them account for the rest, although the balance has shifted away from central government to public corporations.

Copies of "Statistics on Construction," price 1s. each, are obtainable from the Federation of Civil Engineering Contractors, Romney House, Tufton Street, Westminster, S.W.1.

#### "GET ON WITH BUILDING THE ROADS"

The Minister of Transport knows that the real answer to crowded roads is modernisation on a scale not yet attempted, said Lord Derwent, chairman of the British Road Federation at the Federation's annual general meeting held in London last week.

"The theoretical perfection of maximum use from overloaded roads is one thing," he stated, "but practical limits exist beyond which dislocation and extra cost to trade and industry far outweigh the marginal benefits of improved traffic flow.

"One would have thought that a Government with five years to prove this would have driven ahead with new plans for motorways and other improvement works, but in fact we were at present freewheeling along on plans cast as long ago as 1957."

In an attack on suggestions that tolls should be levied on certain roads the B.R.F. chairman said: "What absolute nonsense this is." Modern roads were an essential national asset. The road user, who already paid more than £600m. a year in taxation for the provision of community services, should not be called upon alone to pay the cost of roads.

"One cannot but admire the audacity of the Treasury, sitting on a total tax income of some £5,000m. a year and claiming that something less than two per cent. of that sum is the limit of what can be found for road modernisation," said Lord Derwent.

The pity of it was that it was quite obvious that until the Treasury had worked the toll bug out of its system the Minister of Transport was going to be hamstrung with his road building programme. Mr. Marples deserved better treatment.

The B.R.F. chairman made a call to local authorities to use their powers to earmark sites for off-street parking garages. He said that private enterprise, after all, could not be expected to negotiate if there was nothing to negotiate about.

## SYNTHETIC DETERGENTS PROBLEM AT SEWAGE DISPOSAL WORKS

**PROGRESS** towards the solution of the synthetic detergents problem was the subject of a symposium presented on Tuesday at the annual conference of the Institute of Sewage Purification now being held at Scarborough.

In the introductory Paper, Mr. A. KEY, D.Sc., Ph.D., F.Inst.S.P., senior chemical inspector, Ministry of Housing and Local Government, stated that the symposium dealt with the problem as a whole, as it referred to detergent removal from sewage and the effects, such as foaming, on rivers.

The existence of a problem was first recognised in 1948 in a symposium presented to the North Eastern Branch of the Institute. Not long afterwards the problem appeared, first a white foam on the aeration plants at sewage works, then at weirs of rivers and canal locks.

Synthetic detergent usage trebled between 1949 and 1953, and in the latter year the Jephcott Committee was set up by the Ministry of Housing and Local Government. Following its report, a Standing Technical Committee on Synthetic Detergents was appointed to advise and facilitate research on the problem. The research had followed a recommendation of the Jephcott Committee that "manufacturers of household synthetic detergents should investigate the feasibility of producing efficient washing products based on materials which can be readily oxidised or eliminated, and will not cause persistent foaming, during sewage treatment by present available methods."

A new detergent had been developed, labelled JN which, while behaving identically with the older type, labelled PT, as far as washing was concerned, seemed likely to be more easily removed by sewage treatment processes.

Laboratory scale experiments confirmed this, and full scale trials were made at Luton and Harpenden (known as the Luton Experiment) where manufacturers attempted to supply only the JN detergent.

Broadly, this experiment had confirmed that JN was more oxidisable than PT, but

more conclusive evidence awaited the more complete replacement of PT. This work was proceeding.

### Manufacturers' Contribution

MR. G. V. V. SQUIRE, B.Sc., F.R.I.C., of Thomas Hedley and Co., Ltd., Newcastle upon Tyne, in his Paper told of the manufacturers' part in the Luton Experiment. Although speaking of his own firm, the Paper indicated broadly the problems faced by all in manufacturing JN and organising its distribution in the Luton area.

Having overcome the problems of producing the newer detergent free of the very similar older form, it was found necessary to manufacture far more than the theoretical quantity required in order to achieve a full coverage at Luton.

A first check on distribution showed a difficulty in supplying all brands, sizes and special offers all of the new formula. Stocks would, in some small shops, be on the shelves for a long time preventing the new formula material from reaching the consumer, while some stores were supplied by wholesalers from London and elsewhere who were not receiving the JN product.

It was not possible to achieve more than a 75 per cent. coverage without converting production to the new type in the whole of the South of England. This was done in August, 1959. Other manufacturers had taken similar action, and it should shortly be possible to make a full assessment of the Luton Experiment, for almost 100 per cent. of the detergents used there would be of the JN type.

### Laboratory Experiments

MR. G. E. EDEN, B.Sc., F.R.I.C., and MR. G. A. TRUESDALE, B.Sc., A.M.Inst.S.P., of the Water Pollution Research Laboratory, Stevenage, gave details of the laboratory scale experiments carried out on percolating filters and activated sludge plants using a detergent-free sewage to which was added increasing quantities of either the older, PT, detergent or the newer, JN. This showed that whereas only 67 per cent. or 68 per

cent. of the older type was removed in these processes, over 93 per cent. of the newer type was removed.

On the large scale trials (the Luton Experiment) samples of sewage and effluent from the sewage works were examined over two years beginning when only the PT type was present, up to February, 1960, when over 75 per cent. of the JN type was present in the sewage.

Here some difficulties were encountered due to decomposition of the new material in the sample bottles, and the time sewage took to be treated at the works.

However, it was shown that 79 per cent. of the newer, JN, detergent was removed, compared with about 60-65 per cent. of the older type.

The results obtained indicated that with complete replacement of the PT with the JN product, up to 94 per cent. might be removed at the sewage works, leaving for discharge to river only about one-fifth of the June-July, 1958, values.

### Analytical Problems

The "Analytical Problems in the Luton Experiment" were dealt with in the Paper by MR. H. L. BOLTON, F.R.I.C., and MR. P. J. COOPER, B.Sc., A.R.I.C., of the Laboratory of the Government Chemist. Dealing first with the determination of anionic detergents they described how Manoxol O.T. (sodium di-octyl sulphosuccinate) was put forward as a standard in terms of which all results could be expressed.

Infra-red absorption showed promise of providing a means of determining the proportions of the PT and JN sulphonates in a mixture, and by using a grating spectrometer, measurements of the ratio of absorbances at 1,406cm. and 1,396cm. enabled them to determine the proportions of each with an accuracy of  $\pm 5$  per cent. This method showed that in the early experimental work some of the later detergent was in fact contaminated by the original product.

The authors then described in detail the procedure of concentration by foaming, extraction and purification used prior to the determination of the proportions of the two detergents by infra-red absorption.

### M.W.B. Work

MR. C. HAMMERTON, B.Sc., F.R.I.C., M.Inst.S.P., senior chemist, Metropolitan Water Board, gave in the final Paper details of the work carried out since 1954 by his Board on the regular weekly estimations of surface-active material in their river intakes, with particular reference to the River Lee.

These showed that in the River Lee at Hertingfordbury Park concentration of such material showed a significant reduction following the Luton Experiment (235lb. per day in 1958, compared with 161lb. per day in 1959).

A similar reduction had been found at the Board's intake at New Gauge.

## TRINIDAD TECHNICAL INSTITUTE CONTRACT

The main block of the new Technical Institute in Port of Spain costing W.I. \$1,174,846 (£244,759) is to be built for the Government of Trinidad and Tobago by Holland & Hannen and Cubitts (Trinidad), Ltd.

The new L-shaped building will be in Wrightson Road on the west side of the Caribbean Medical Centre, and will house classrooms, practice rooms and an administration area.

Part of the building will be two storeys and part three storeys high and there will be a 62ft. high clock tower. It will cover an area of 534ft. by 34ft. fronting Wrightson Road with a 336ft. by 34ft. return along the eastern boundary of the site.

With a reinforced concrete frame the building will have hollow clay and concrete block panel walls and partitions and asphalt-covered flat roofs.



A front view of the administration block of Dexion group's new Hemel Hempstead factory. The factory has a floor space of 150,000 sq. ft. and stands on an eight-acre site, five acres of which have been developed. The company has the option on another eight acres. The factory was designed by Clifford Tee and Gale and built by C. Miskin and Son, Ltd.

## COMPLETION OF SIX-STOREY LONDON OFFICE BLOCK



Ferguson House

**F**ERGUSON HOUSE, a new six-storey office block with a gross area of 66,996 sq. ft., has recently been completed on a site in Marylebone Road, London, N.W.1, by John Laing and Sons, Ltd., for occupation by British Plaster Board (Holdings), Ltd.

Structurally the building has a reinforced concrete frame and is of flat slab construction with external facings of London stock bricks. It is faced on the ground floor in Empire stone, with granite slab panels beneath the metal windows. All windows on the road frontage have double glazing with pressed steel sub-linings.

A reinforced concrete spine carries all the main services, including two 16-person high speed lifts running at 300ft. a minute, the ventilation, heating and electrical systems, and lavatories which are installed at mezzanine levels.

Internally the building is finished to a high standard. The entrance hall has marble lined floors and walls, and the prin-

cipal staircase, which runs from the rear of the vestibule, is of precast terrazzo with tread and riser units in one. A secondary staircase located on the west side of the building is of granolithic with cerebos tiled insert treads. Flooring generally is of half inch Feltwood afzelia wood block.

Walls and ceilings have been finished in the range of 31 different products of the member companies of the British Plaster Board group. Extensive use has also been made of the partition units produced by the group.

Full central heating is provided throughout the building by low pressure hot water steel radiators located under each window fired by Potterton gas fired boilers located on the fifth floor. A mechanical ventilation system is provided for the board room suite on the third floor, executive dining room and staff restaurant and kitchen in the basement, and to lavatory blocks at mezzanine levels. Lighting is generally fluorescent throughout.

The basement area has an overall ceiling

height of 10ft. and incorporates an executive dining room, employees' staff restaurant and kitchen, as well as various service rooms for G.P.O. telephones, gas meters, cleaners' storage space, etc. A secondary entrance is provided at the rear of the building leading to an open area with steps to the ground-floor parking level.

The ground floor, which has an overall ceiling height of 12ft. incorporates the main entrance hall, vestibule and post sorting room, as well as general offices. The rear entrance gives direct access to the car park.

First and fourth floors, with an overall ceiling height of 10ft. 6in., provide open floor space, and the fifth floor, with a ceiling height of 9ft. 9in., incorporates offices, the heating chamber, lift motor and fan rooms.

Clifford Culpin, O.B.E., was the architect for building, with Yates, Cook and Darbyshire, as architects for the internal finishings. The consulting engineers were W. V. Zinn and Partners, and the quantity surveyors, Gardiner and Theobald.

## AMERICAN ROAD EXPERT SPEAKS IN LONDON

**T**IME, rather than distance, is what counts to most people today. That is the view of Mr. Fred Burggraf, director of the U.S. Federal Government Highway Research Board, who presented a Paper to a British Road Federation meeting in London last week.

Measured by time, he stated, United States urban motorways are cutting distances in half for drivers using these roads. They are also saving up to 3½d. a mile in costs. Their performance in this regard stands out by comparison with city streets, where travel has slowed to a snail's pace.

One instance Mr. Burggraf quoted to support this statement was in Boston, where trips that formerly took from 18 to 25 minutes now take 3 minutes on that city's new motorway, the Central Artery.

Figures given by Mr. Burggraf show that the accident rate on urban motorways in America is only a third of that on ordinary streets, and the fatality rate is only a half.

Total outlay on building these motorways is high (a cost of \$1m. per mile has not been unusual) but running costs are lowered for vehicles using them. Motorways pay for themselves in a few years. It has been established that—even at a conservative estimate—urban motorways save nearly 1½d. for every mile a vehicle runs.

Allowing for time savings as well, the total saving is 3½d. a mile.

When motorways are built to ease the flow of traffic on a city's congested streets, although there are detriments and dislocations caused, the net showing is that of a significant contribution to the national wealth and well-being.

## \$1M. CONTRACT FOR CEMENTATION

A \$765,000 contract for the construction of a 1,200ft. deep shaft has been awarded by the United States Atomic Energy Commission to the American subsidiary company of the Cementation Group.

The shaft will provide access to a drive designed for the detonation of a nuclear device for the development of atomic energy for peaceful purposes. Known as "Project Gnome," the site is at a point 25 miles south-east of Carlsbad in the salt beds of New Mexico.

Announcing the award of the contract recently, a spokesman for the Cementation Group's head office in London said that work was scheduled for completion by June, 1961.

## "SUICIDAL" BUILDING TENDERS N.F.B.T.E. President's Comments

"It is paradoxical that despite the increased volume of new work currently coming forward, there are building firms still submitting tender prices which can only be described as suicidal," stated Mr. D. E. Woodbine Parish, national president, at the half-yearly general meeting of the South-Western Federation of Building Trades Employers, held in Bristol last week.

"Many offers being made today are manifestly so low that it must be impossible for the firms concerned to carry out a satisfactory job for the client without sustaining a financial loss," he said.

"While healthy competition, be it in price or in time performance, or both, is in the interests of the community, the submission of uneconomic tenders for building work is highly damaging in the long run to the national economy, for it inevitably weakens the profitability of the industry and leads to a lowering of quality standards, restriction of training facilities, deferment of mechanisation programmes, inadequate plant replacement, inferior welfare provision and the tendency to disregard safety precautions, all of which seriously retard and impair the expansion of the industry's productive capacity."

## Men and Movements

**MR. S. A. STEWART, C.B.E.,** M.I.Struct.E., A.M.I.C.E., has been appointed director of the British Road Tar Association. For five years he was superintendent of the Experiment Bridging Establishment (now M.E.X.E.) at Christchurch. More recently he was deputy director of Fortifications and Works in the War Office, and following this spent three years in the Middle East in charge of all rebuilding of permanent accommodation. His last appointment before retiring at the end of 1959 was director of R. E. Equipment, Ministry of Supply.



S. A. STEWART

The Dowty Group have announced the appointment of **Mr. Lionel Harper**, as managing director of Dowty Hydraulic Units, Ltd. Mr. Harper was formerly managing director of Massey-Ferguson (Great Britain), Ltd.

After 60 years as an architect, **Mr. Laurence M. Gotch**, a partner of the Kettering firm of architects, Gotch and Partners, has retired.

**Mr. A. K. Hamilton**, of H. and A. Hamilton, Waterford, Eire, has been elected president of the Federation of Builders, Contractors and Allied Employers of Ireland.

An entirely new organisation, the power unit division, has been created by The Birmingham Small Arms Co., Ltd., to handle its agricultural and industrial engine business at Redditch. The manager of the new plant is **Mr. H. V. Gray** and the sales manager **Mr. G. R. Turner**. **Mr. D. B. Land** will be responsible for the northern half of the U.K. and **Mr. E. M. Hazell** for the south.

**Mr. E. W. H. Hadfield**, export manager of Ransomes and Rapier, Ltd., is making a three-week tour of Middle East countries to include visits to agents and potential agents in Lebanon, Jordan, Libya, Syria and Egypt, Kuwait, Bahrain and Qatar. He will return by way of Greece.

Two overseas appointments have been announced by Armstrong Whitworth (Metal Industries), Ltd. Appointed resident area sales manager, Middle East, is **Mr. William McK. Wright**, who for 27 years has lived in the Middle East, India and Pakistan. Appointed as special representative to the Soviet bloc of countries is **Mr. Guy Chesham**, formerly an official with the Machine Tools Trade Association.

Head Wrightson and Co., Ltd., have announced the following appointments among their subsidiary companies: **Mr. J. G. Allen** as managing director of Head Wrightson Steel Foundries, Ltd.; **Mr. G. Jones** to be managing director of Head Wrightson Stampings, Ltd.; **Mr. W. H. Mather** as managing director and **Mr. G. Gowthorp** as commercial director of The Head Wrightson Machine Co., Ltd.; and **Mr. T. H. Stayman** as managing director of Head Wrightson Iron and Steel Works Engineering, Ltd.

**Mr. Omer G. Voss**, managing director of International Harvester in Great Britain since 1954, has returned to the United States for re-assignment to an important position for the parent company, details of which are yet to be announced. He is succeeded as managing director by **Mr. David C. Haney**, who came to IH in Britain in 1954 as director of sales. Mr. Haney was appointed assistant managing director last April.



D. C. HANEY

**Mr. J. E. Bishop** has been appointed general sales manager of the Pulsometer Engineering Co., Ltd., and Joseph Evans and Sons (Wolverhampton), Ltd. Mr. Bishop has held appointments with the Permutit Co., Ltd., and Worthington Simpson, Ltd., before becoming sales manager for Sigmund Pumps, Ltd., and subsequently general manager of Lee Guinness, Ltd.

London Transport have announced that **Mr. E. J. Pickett** has been appointed principal executive assistant in the office of the new works engineer.

Elected president of the Royal Society of Ulster Architects for the third year in succession is **Mr. G. Philip Bell**, who is in charge of the Lurgan office of G. P. and R. H. Bell, architects.

**Mr. John D. Trustram Eve**, senior partner of J.R. Eve and Son, surveyors, has been elected president of The Royal Institution of Chartered Surveyors. Mr. Eve was first elected a member of the Council of the Institution as representative of rating surveyors in 1948, and was elected a vice-president in 1956. He became senior vice-president in 1959. He also served as chairman of the Branches and Public Relations Committee of the Institution, 1957-59.



J. D. T. EVE

**Mr. H. F. R. Catherwood**, a director of Richard Costain, Ltd., has resigned from the board to take up another appointment. He has also resigned from the boards of those subsidiary companies of which he was a director.

A goodwill and fact-finding mission from the Institute of Directors is now visiting Russia following an invitation from the State Scientific and Technical Committee of the U.S.S.R. The mission includes **Sir George Binney**, a director of United Steel; **Sir Percy Lister**, chairman of R. A. Lister and Co., Ltd.; **Sir Andrew MacTaggart**, chairman of Power Securities; and **Mr. J. B. Scott**, a director of Crompton Parkinson. They will return after a fortnight, on July 2.

Following the retirement of **Mr. F. Payne**, director of technical services, The Cement Marketing Co., Ltd., the following appointments have been made: **Mr. H. A. Holt**, M.I.Struct.E., is general manager of the development division, and **Mr. K. H. Brittain**, A.M.I.C.E., A.M.I.Struct.E., becomes chief technical adviser; **Mr. J. W. Whalley** is appointed general manager, special products division; and **Mr. H. H. Marshall**, general manager to whiting division. **Mr. A. H. Du Verger** has been appointed publicity manager.

### MUNICIPAL

**Mr. Arnold Kershaw**, general manager to the West Hertfordshire Main Drainage Authority, has been installed as president of The Institute of Sewage Purification. He was elected an associate member of the Institute in 1925, a corporate member in 1931 and a Fellow in 1951. He has served on the metropolitan and southern branch committee since 1929 and been a member of Council almost continuously since 1930. He was also assistant hon. secretary from 1945-49 and hon. joint secretary from 1954-55.

**Mr. Allan Somerville**, assistant cleansing superintendent in the public cleansing and transport department of Birkenhead B.C., has won the J. C. Dawes Travelling Scholarship of the Institute of Public Cleansing for 1960. He will carry out further study into public cleansing and will go to Wadham College, Oxford, for a course in advanced studies in management principles and practice organised by the British Institute of Management, of which he is an associate member. He hopes to visit large industrial and local government units in Britain.

Hampshire's county divisional surveyor to the Hartley Wintney division, **Mr. Harold H. Parkhouse**, has retired after 18 years' service in the post. He joined the C.C. in 1930.



Ernest Doe and Sons, Ltd., recently flew a party of plant executives of civil engineering contracting firms to the works of J. C. Bamford (Excavators), Ltd., to see the new JCB 4 machine. Above is the section of the party which departed from Gatwick; the remainder flew from Leavesdon

## PUBLIC CLEANSING SERVICE

### The Challenge of the Future

MR. H. M. Ellis, M.B.E. president of the Institute of Public Cleansing and transport and cleansing officer, Bristol, addressing last week's annual conference of the Institute held at Portsmouth said enormous progress had been made in the public cleansing field. Methods of refuse collection particularly in multi-storey buildings, had improved greatly; refuse utilisation and disposal were being approached in many and varied ways and more and more mechanical aids were being offered and tried for street cleansing.

The importance which was now attached to the service by local authorities generally was proved by the numbers regularly attending the annual conference, delegates frequently being attracted not only from Great Britain, but from overseas countries ranging from the Caribbean to the Far East.

#### Challenge of the Future

"Our duties are to control and perform one of the two primary public health services," he said. "In the process of carrying out this function we have become a major transport undertaking, a fairly considerable user of plant (incorporating those of mechanical, electrical and civil engineering); whilst in a lesser degree, we touch also on landscaping and agriculture. To achieve success, not the least of the requirements is a business approach.

"Quite recently we have been called upon to deal with the provisions of the Litter Act; currently, the effects of the implementation of the Clean Air Act are being felt; and it is significant that in the move to combat noise, one of the first mentions has been that of the dustbin lid. Added to these we appear to be rapidly approaching a 40-hour week, whilst already the trade unions are speaking in terms of a 36-hour week. All these are problems which in aggregate present an enormous challenge to our technical and organising ability. The most far reaching will undoubtedly be that of a reduction in working hours which, without a corresponding improvement in efficiency, will automatically result in increased requirements of men, vehicles and depot accommodation.

#### Problem of Costs

"How then are costs to be kept within reasonable bounds? It is doubtful whether salvage can help more than at present. In fact, it may well be that further auto-

mation and mechanisation in industry and agriculture, coupled with an increasing use of synthetic materials in display and packaging, will result in a decreased income from this source.

Here is where business ability will be necessary, although it must always be remembered that public cleansing is our first and foremost consideration. One obvious way is the reduction of the volume and weight of refuse at the source, and in this connection it is significant that sink grinders have made their appearance and in a few instances have been installed in dwellings in this country. Work study and organisation and method investigations by experts qualified to perform them, and I particularly stress the qualifications, will help. Any measures, mainly under the heading of welfare, which reduce the incidence of the sickness and accident rate, will be more than repaid. Technical innovations will be of assistance, and in this direction one thinks particularly of advancement in vehicle design. Immediate improvements and/or innovations may well incorporate, to mention just a few, air suspension, disc brakes, alternators in lieu of dynamos, etc. As a future outlook there are the possible introductions of the rotary engine, the fuel cell, or, who knows, even the wheel-less carriage.

"Traffic engineering would appear to be rapidly moving along the lines of far more one-way streets, dual carriageways, and no intersections or cross-flow turns. This presents the vehicle manufacturers with an immediate challenge—that of developing a machine capable of efficiently cleaning the area of the road channels from either the offside or the nearside.

"The time cannot be too far distant when the numbers of supervisory staffs, greatly reduced during the past 25 years in relation to the volume of work carried out, will be even further reduced by the development of control, direction, advice and instruction by means of short-wave radio communication and the advent of closed circuit television.

"The calibre of officer required in the future administration of the service will be in direct ratio to the extent by which supervisory staffs are reduced and technological advancement achieved. Competent qualified men in sufficient numbers will be assured only if the service attracts the right type of entrant; if adequate facilities for training are available and if the opportunity is given to take advantage of them."

## CIVIL ENGINEERING PROBLEMS OVERSEAS

### Lord Perth Opens London Conference

THE great importance of the civil engineer's work in underdeveloped territories was stressed by Lord Perth, Minister of State for Colonial Affairs, when he opened the "Conference on Civil Engineering Problems Overseas" being held this week at the Institution of Civil Engineers in London.

More than 150 delegates from overseas are attending the conference, including visitors from Portugal and the United States—proof according to Lord Perth of the value of this conference which is held biennially.

He drew attention to the fact that the conference was now entitled "overseas problems" whereas it was once "colonial problems." This, he said, was only right in a world where colonial territories were striving for independence. The civil engineer had a vital role to play in this political development, particularly where his work was enhancing the progress of primitive peoples.

#### Training Local People

Lord Perth added that the exchange of information and experience at the conference would be of extreme value, but he told the delegates that it was also essential that the local people in the overseas territories should be taught and trained. This not only created friends but was also good long-term business.

He concluded by reminding the conference of the valuable work being done by laboratories in this country, such as the Water Research Laboratory at Wallingford, the Road Research Laboratory and the Building Research Station, the last two of which had sections dealing with works in the tropics.

## BARBADOS HOSPITAL STEELWORK CONTRACT

William Bain and Co., Ltd., Coatbridge, Scotland, have secured the contract for the supply of the fabricated structural steelwork for the Bridgetown Hospital, Barbados. The value of the contract is in the region of £110,000.

Local agents are the Barbados Foundry, Ltd., and the material for this contract is being supplied through the Crown Agents for Overseas Governments and Administrations. The consulting engineers are Coode and Partners and the architect for the project is Mr. K. J. Tomlin, O.B.E., F.R.I.B.A.

#### Qatar Power Station

William Bain have also been awarded the contract for the supply of the fabricated structural steelwork for the Ras Abu Aboud Power Station, Doha, Qatar, Arabian Gulf. The value of the contract is over £43,000.

The consulting engineers for the complete scheme are Preece, Cardew and Rider, and Wilton and Bell are the consultants for the civil works.

## Obituary

It is with regret that *The Contract Journal* records the death of the following:

Mr. W. E. Cone, O.B.E., the late technical adviser of the British Road Tar Association. Mr. Cone was appointed technical adviser in 1925 to the Joint Road Tar Committee representing the gas, coke oven and tar distilling interests, which was the forerunner of the British Road Tar Association formed in 1926. He became technical adviser of the B.R.T.A. on its formation and held this office until his retirement on March 14, 1958. He played a prominent part in the formation of the International Road Tar Conference in 1931 and was in fact its first secretary. Mr. Cone was in his 73rd year.

## FOR THE DIARY

June 21-24

Annual conference of the Institute of Sewage Purification, Scarborough.

June 25.

Summer dance of the London branch of the Contractors Mechanical Plant Engineers at the Cherry Tree Hotel, The Green, London, N.14, at 8 p.m. Tickets can be obtained from the hon. social secretary, Mr. C. E. Hilditch, 100 Cherrydown Avenue, Chingford, London, E.4.

June 30-July 3.

Sand and Gravel Association of Great Britain. Short Course on "The Production and Technology of Sand and Gravel Aggregates," at the Imperial College of Science and Technology, South Kensington.

July 1

Institution of Highway Engineers. Visit to sites of works in Lancashire.

July 4-7

Half-yearly general meeting of the National

Federation of Building Trades Employers in London.

July 6-8.

Housing Centre annual conference at County Hall, London.

July 7.

Meeting of the London branch of the Contractors Mechanical Plant Engineers at the Park Royal Hotel at 7.30 p.m. Film show given by Foden Motors, Ltd.

July 20-24.

Institution of Municipal Engineers. Northern Districts Summer School at the University of Sheffield.

Aug. 30-Sept. 3

Royal Institution of Chartered Surveyors. Annual conference at the University College of North Wales, Bangor.

Oct. 21

Annual dinner of the Society of Engineers at the House of Commons.

# Current Constructional Activities

## PROJECTS • CONTRACTS • AWARDS

THIS editorial feature provides readers with a comprehensive news service covering forthcoming private and public construction work. Commencing on this page information is given concerning future projects followed by details of tenders being invited. In the third section will be found news of tenders recommended for acceptance, tenders accepted and contracts awarded. Attention is also drawn to the advertisements covering contracts and appointments appearing in the front part of the Journal.

### BUILDING AND DECORATING (See also Housing Schemes)

**Abbots Langley, Herts.**—Parish Council to submit to M.E., C.C. and Watford R.D.C., for planning approval and grant aid, plans for the erection of a swimming pool in the Manor House grounds.

**Accrington, Lancs.**—E.C. propose two new classrooms, kitchen and cloakroom facilities at St. Mary's C.E. Junior School, Woodnook.

**Aylesbury, Bucks.**—B.C. to apply for sanction to borrow £6,778 for improvements at The Vale swimming pool.

C.C. recommended to approve in principle plans for the erection of a reception centre at 23 Walton Road.

**Bangor, Caerns.**—City Council to sell land at Dean Street to the University College as site for the erection of a large building extension.

**Barnes, Surrey.**—B.C. recommended to approve erection of boathouse on land at Kew Meadows Path. Estimated cost £6,000.

B.C. recommended to approve plans for construction of swimming pool at Barn Elms Park, for C.C.

**Barnet, Herts.**—U.D.C. are considering plans for the erection of a seven-storey office block at Great North Road, Underhill, for the M.W.

**Barnsley, Yorks.**—E.C. have approved proposal by the managers of St. Mary's C.E. Schools to provide two new schools, one in Summer Lane and one on the St. Helen's estate. Estates Committee to negotiate for the acquisition of a site of 3½ acres in Summer Lane for erection of the primary school, and the Borough Engineer to be asked to earmark a site at St. Helen's for the second proposed school.

**Bath, Som.**—City Council to prepare site plans for the erection of a swimming pool at Avon Street.

**Bishop Auckland, Dur.**—U.D.C. Surveyor to prepare scheme for the proposed redevelopment of the shopping centre in Finkle Street and Fore Bondgate.

**Bletchley, Bucks.**—Co. E.C. hope to obtain tenders later in the current financial year for the construction of the new branch library at Bletchley.

**Blyth, Northumb.**—B.C. approved in principle the erection of roller skating rink.

B.C. have approved alterations to Blyth public library. Estimated cost £3,000.

**Boston, Lincs.**—Ministry have approved revised preliminary plans for a crematorium, for B.C. Estimated cost £49,640.

**Brechin, Angus.**—Dean of Guild Court have approved plans for a covered enclosure to accommodate 700 persons at Glebe Park, for Brechin City Football Club.

**Bridgnorth, Salop.**—B.C. recommended to apply for sanction to borrow £2,820 for the conversion of 21 East Street.

**Bridlington, Yorks.**—B.C. recommended to approve the erection of 12 garages off Greenfield Road and four off Cranbeck Close. Estimated cost, including road works and provision of hard-standing areas, £1,394 and £604 respectively.

**Bristol.**—A. F. French and Partners, Halifax House, 57 Augustine's Parade, are the architects for a block of showrooms, offices and a warehouse at Victoria Street, for Denton Heath Trading Co., Ltd.

**Cardiff.**—City Council have approved scheme for the proposed erection of new Welsh regional headquarters on land outside Cardiff Castle walls, for the B.B.C.

**Carlisle, Cumb.**—City Council's scheme for a community centre at Harraby is to proceed. First stage of the work will cost £16,000 and the second £21,000. The city engineer is L. J. A. Stow, 18 Fisher Street.

**Chesterfield, Derbys.**—Sheffield Regional Hospital Board recommended to appoint A. E. Thornton-Firkin and Partners, Masons Chambers, Lower Pavement, Chesterfield, quantity surveyors for provision of psychiatric accommodation at Scarsdale Hospital.

**Chester-le-Street, Dur.**—Wright and Kellett, Ltd., builders, Ashley Terrace, are to erect workshop and offices.

**Chester.**—Liverpool Regional Hospital Board to prepare plans immediately for the erection of a base hospital to serve the Chester area at the City Hospital site.

**Chorley, Lancs.**—C.C. recommended to approve the erection of a school clinic and child welfare centre. Estimated cost £28,090.

**Coatbridge, Lanarks.**—The Western Regional Hospital Board have approved in principle a scheme for the centralisation of boiler plant and the upgrading of kitchen facilities at Coat-hill Hospital. Estimated cost £42,000. The Board also approved a plan for the provision of a general practitioner unit at the Alexander Hospital, £70,000.

**Cockermouth, Cumb.**—Millers (Great Yarmouth), Ltd., have applied to the U.D.C. for permission to erect cloakrooms and toilets at Derwent Mills, extend a storage factory, and erect five bay extensions to the existing factory building.

**Consett, Dur.**—Newcastle Breweries, Ltd., Haymarket, Newcastle upon Tyne, are planning public-house in Middle Street. The firm have their own architects' department.

**Coventry.**—City Council propose the erection of an old people's home at Quinton Park. Estimated cost £49,500.

**Crawley, Sussex.**—U.D.C. have approved the provision of a covered swimming pool at the sports centre in Three Bridges Road. Estimated cost £165,000.

**Darlington, Staffs.**—C.C. plan the erection of a youth centre at Bentley estate.

**Darlington, Dur.**—R. W. Gregory and Partners, Pilgrim House, Pilgrim Street, Newcastle upon Tyne, have been appointed consulting engineers for pathological laboratory, and outpatient's dept., at Darlington Memorial Hospital, for Newcastle Regional Hospital Board. The Board's Chief Architect is P. H. Knighton.

**Derby.**—Sheffield Regional Hospital Board recommended to appoint Naylor, Sale and Widdows, St. Mary's Gate, Derby, archt and Messrs. Gleds, 7 Clinton Terrace, Derby, quantity surveyors for linen and sluice room at Derwent Hospital.

**Dewsbury, Yorks.**—B.C. recommended to apply for sanction to borrow £4,410 for adaptation of premises in Victoria Road for office and depot accommodation for Street Ligh Department.

**Doncaster, Yorks.**—H. A. Hickson and Son, 51 Hallgate, are preparing plans for the erection of a Y.M.C.A. centre in Wood Street. Estimated cost £140,000, including £20,000 for furnishings.

**Doncaster, Yorks.**—Sheffield Regional Hospital Board recommended to appoint G. L. Thompson, 46 Coney Street, York, architect for new bed lift and labour rooms at Western Hospital.

**Dover, Kent.**—The Diocesan Board of Finance have approved the erection of a school at Ashen Tree Lane.

**Dublin, Eire.**—Downes and Meehan, 37 Leeson Park, Dublin, are the architects for a 20,000 sq. ft. science building for University College, John O'Brien, 8 Leinster Street, the quantity surveyor, and J. Varming and S. Mulcahy, 4 Northbrook Road, mechanical and electrical engineers.

**Durham.**—Dashwood and Partners, 10 Lower Grosvenor Street, London, S.W.1, are planning housing developments and the erection of hotel and shops on about 30 acres of land at Brancepeth. Outline proposals for the work have been prepared by Trollope and Son, Mount Street, Grosvenor Square, London, W.1; plans by I.C.I., Ltd., Slough, for a paint warehouse and offices at Gillesgate Moor, Belmont, have been approved.

**Durham.**—Freeman, Hardy and Willis, Ltd., Enterprise House, Rutland Street, Leicester, are to rebuild two shops in Silver Street.

**Ealing, Middx.**—C.C. recommended to approve obtaining of tenders from B.C.'s selected list of contractors for conversion of classroom into advanced biology laboratory and provision of balance room for chemistry laboratory at Elliotts Green Grammar School. Estimated cost £1,200.

**Ealing, Middx.**—C.C. recommended to approve various works at Ealing County School for Boys. Estimated cost £4,845.

**East Lothian.**—South of Scotland Electricity Board, 52 Melville Street, Edinburgh, propose to erect a coal-burning power station, possibly at Preston Links, near Cockenzie. Estimated cost £50m.

**Eastry, Kent.**—Ministry have granted planning permission, subject to confirmation, and R.D.C. have appointed Martindale and Old-acres, architects, 27 Victoria Road, Deal, to prepare detailed plans and estimates for the construction of a Council chamber.

**East Sussex.**—E.C. to submit to Ministry for approval schemes for the erection of a youth centre at Haywards Heath and an extension of Stafford House, the County Youth Centre at Hassocks. Estimated cost £29,500 and £34,650, respectively.

**Eccles, Lancs.**—C. S. Allott and Son, 1 North Parade, Manchester, 3, are the consultants for long-term project, for erecting distribution store, tanks, bottling halls, canteen and offices at Victoria Mills, Cawdor Street, for Scottish Breweries, Ltd., Abbey Brewery, Holyrood Road, Edinburgh, 8.

**Edgware, Middx.**—Bills of quantities are being prepared for erection of church and parsonage adjoining Spur Road housing estate, Stone Grove, for Parochial Church Council of Parish of St. Margaret, Riley and Glandfield, 6 Raymond Buildings, Gray's Inn, London, W.C.1, are the architects, and Fleetwood, Eversden and Partners, 30 Terminus Road, Eastbourne, the quantity surveyors for the scheme. Estimated cost £17,000.

**Edinburgh.**—Civic Amenities Committee have recommended the construction of a swimming pool at the east end of the Meadows to be built in time for the Empire Games, 1966.

Dean of Guild Court have approved the erection of a telephone exchange in Clinton Road. Estimated cost £400,000.

**Enfield, Middx.**—C.C. recommended to approve plans for erection of phase one of Hadley Wood Primary School and clinic. Estimated cost £55,805.

**Enfield, Middx.**—North Middlesex Area Planning Committee have approved outline application for erection of eight shops, with flats above, 11 garages and three detached houses with garages on site and in grounds of 1 Crescent West, Hadley Wood, for F. Dunnill. Architects for the scheme are Stirling and Margaret Craig, 30 London Road, Stevenage, Herts.

**Epsom, Surrey.**—Co. Planning Committee have approved in outline scheme for erection of clinic at junction of Tattenham Crescent and Downland Way, Epsom Downs.

**Erith, Kent.**—B.C. have approved scheme for constructing bathrooms in 47 Council cottages at Brook Street. Estimated cost £23,500.

**Ewell, Surrey.**—C.C. recommended to approve erection of clinic at Ewell Court. Estimated cost £21,816.

**Fareham, Hants.**—South Hampshire and Portsmouth Branch of the Royal Society for the Prevention of Cruelty to Animals have submitted to U.D.C., for approval, scheme for an extension to the animal shelter at Salisbury. Estimated cost £1,500.

**Felling, Dur.**—C.C. to erect community centre at Leam Lane at a cost of £18,700.

**Felling, Dur.**—Pomery Developments, Ltd., Wigmore Street, London, W.1, are planning the erection of offices, showrooms and shops in High Street and Providence Place.

**Folkestone, Kent.**—B.C. have approved scheme for the modernisation of 703 Council houses.

**Gateshead, Dur.**—B.C. to spend £12,000 on the erection of greenhouses near Saltwell Park.

E.C. have submitted to the M.E. a school-building programme for next year including four-form entry schools for boys and girls to cost £362,000; three-form entry R.C. school at Wrekenton to cost £132,000; infants' school at Hendon Road, £42,350; and junior school at Chester Place, £54,000.

It is expected that a contract will be let soon for the erection of transport depot including warehouse, offices, canteen, etc. (75,000 sq. ft.) on Team Valley estate, for I. W. Capstaff, Ltd., Benton, Newcastle upon Tyne. The architect is M. L. Kubik, Meridian Way, Newcastle upon Tyne 7.

**Gloucestershire.**—E.C. propose the expansion of Gloucestershire Training College of Domestic Science including the erection of three hostels. Estimated cost £371,939.

**Guildford, Surrey.**—C.C. recommended to approve internal decoration and renewal of electrical wiring at Stoughton Clinic. Estimated cost £1,255.

**Guildford, Surrey.**—Guildford Theatre's Board of Directors are to apply for planning permission for erection of new theatre and restaurant on site beside River Wey opposite Millmead. Architects for scheme are Scott, Brownrigg and Turner, 32 London Road. Estimated cost £100,000.

**Guisborough, Yorks.**—J. W. Cameron and Co., Ltd., Lion Brewery, West Hartlepool, are to carry out structural alterations to the Victoria Hotel, Lingdale.

**Harrow, Middx.**—B.C. have approved erection of health clinic at junction of Cecil Park and Marsh Road, for C.C.

**Harrow, Middx.**—C.C. recommended to approve, subject to planning approval, scheme for erection of changing accommodation at Blackwell Secondary School. Estimated cost £1,969.

**Hartlepool, Dur.**—Steelley Magnesite Co., Ltd., are awaiting planning approval before placing contracts for £3m. extensions to their works.

**Hastings, Sussex.**—B.C. have approved plans, subject to conditions, for the erection of a building comprising garage and storage in basement, four shop units on ground floor, offices on first floor, four flats on second floor, and six maisonnettes on third and fourth floors, for Star Holdings (Greater London), Ltd. Porte and Partners, architects, 16 Devonshire Square, London, E.C.2.

**Healing and Overbury, Ltd., Rodney Lodge, Rodney Road, Cheltenham, are the architects for the redevelopment of the Albany and Metropole Hotel bombed sites at Robertson Terrace, for Plummer Roddis, Ltd., Hastings.**

**Hendon, Middx.**—C.C. recommended to approve scheme for repairs to roof and rainwater pipes at the county school. Estimated cost £1,860.

**Heston and Isleworth, Middx.**—C.C. recommended to approve scheme for improvement of kitchen facilities at Cranford Junior School, estimated cost £2,435; alterations of domestic science and needlework rooms at Isleworth Polytechnic, £6,250.

**Hexham, Northumb.**—U.D.C. Surveyor to prepare plans for three shops and flats on the Priestlands estate.

**Hornchurch, Essex.**—North East Metropolitan Regional Hospital Board recommended to approve the provision of operating theatres, 20-bed maternity unit and limited outpatients' facilities; improvements to pathology and X-ray departments and a reduction in sizes of wards, at St. George's Hospital, Sutton Lane.

**Hornsey, Middx.**—C.C. recommended to approve, subject to planning approval, scheme for erection of pavilion at Redston Road playing field. Estimated cost £5,820.

**Hounslow, Middx.**—W. E. and E. M. Cross, The Studio, Osterley Road, Isleworth, are architects for proposed Church of Holy Trinity, for Parochial Church Council. Estimated cost £100,000.

Ministry have granted outline planning permission to F. W. Woolworth, Ltd., Woolworth House, 242 Marylebone Road, London, N.W.11, for development of site in High Street.

**Hull.**—Sketch plans to be prepared for improvement of an existing operating theatre in the reception block at De la Pole Hospital, for the Leeds Regional Hospital Board.

**Inverness.**—Dean of Guild Court have approved the erection of a transport depot and offices at Burnett Road, Longman, for Charles Alexander and Partners (Transport), Ltd., 90 Kennedy Street, Glasgow, C.4. Estimated cost £10,000.

**Keynsham, Som.**—U.D.C. have approved redevelopment scheme for Bath Hill, comprising the erection of offices and shops.

**Kingston-upon-Thames, Surrey.**—T.C. recommended to approve erection of sports pavilion at Norbiton sports ground. Estimated cost £12,000.

**Leeds.**—Petrofina (Great Britain), Ltd., Yarn Street, have submitted plans to the Town Planning Committee for erection of a three-storey building on a site near Kirk-gate and High Court, near Leeds city centre.

Outline applications submitted by the following to the Town Planning Committee: Phoenix Assurance Co., Ltd., for demolition of existing building in South Parade and erection of new block of offices there; William Rhodes, Ltd., of Carlton Cross Mills off Woodhouse Lane, for new factory and offices in Ring Road, West Park.

**Leicester.**—Sheffield Regional Hospital Board recommended to appoint Pick, Everard, Keay and Gimson, 6 Millstone Lane, architects and engineers for artificial limb and appliance centre and group pharmacy at Royal Infirmary.

**Lichfield, Staffs.**—City Council have approved plans for rebuilding and extensions to premises at Birmingham Road, for Three Spires Motor Co., Ltd. Estimated cost £40,000.

Ministry have approved scheme for the erection of a showroom and filling station at St. John Street, for Kennings, Ltd.

**Lincoln.**—Sheffield Regional Hospital Board recommended to appoint A. E. Thornton-Firkin and Partners, 10 Mint Street, quantity surveyors for improvements to mortuary and reception unit at St. George's Hospital and Myles-White and Associates, White Hart Street, Mansfield, architects for conversion of office to residential accommodation at Harmston Hall.

**Linthgow, West Lothian.**—B.C. have approved plans for the erection of a petrol filling station, workshop, showroom, offices and parking area at the site of the former picturehouse, High Street, for Scottish Oils and Shell-Mex, Ltd., 53 Bothwell Street, Glasgow, C.2. Estimated cost £45,000.

**Llandudno, Caerns.**—C.C. have approved site at the corner of Argyll Road and Conway Road for the erection of a clinic.

**London Colney, Herts.**—Ministry have approved plans for the erection of seven shops, maisonnettes and garages at White Horse Lane, for Day (Contractor), Ltd., 705 High Road, London, N.12.

**Luton, Beds.**—Norwich Union Insurance Societies propose the erection of a six-storey block of shops and offices on the site of the Cresta Ballroom. Howell and Brooks, 4 Queen Victoria Street, London, E.C.4, are the architects; Gordon Harris and Barton, 7 Connaught Place, Hyde Park, London, W.2, the quantity surveyors; and F. S. Snow and Partners, Ross House, 144 Southwark Street, London, S.E.1, consulting engineers for the scheme. Work may commence this autumn. Estimated cost £500,000.

**Magherafelt, Londonderry.**—Hospital Committee propose to erect a unit for old people and chronic sick at the Mid-Ulster Hospital. Estimated cost £50,000.

**Maidstone, Kent.**—Ministry have approved in principle the erection of public conveniences at Fairmeadow car park.

B.C. recommended to invite tenders for the supply and erection of a refreshment pavilion at Mote Park.

**Merton and Morden, Surrey.**—C.C. have approved erection of R.C. boys' school on land behind Arras Avenue, Morden. Estimated cost £100,000.

**Middlesbrough, Yorks.**—Middlesbrough Co-op. Society, Ltd., Linthorpe Road, are to modernise their shop premises at Coniston Grove, and convert Corporation Road branch into a self-service centre.

Planning Committee have provisionally approved an outline scheme for the redevelopment of 11-55 Dundas Street, for the Metropolitan Railway Surplus Land Co., Ltd. New shops and offices are to be built and the work will take three years to complete. The architects are Evans, Cartwright and Woollatt Clarendon Street, Nottingham. Estimated cost £500,000.

**Morley, Yorks.**—B.C. recommended to approve first stage of proposals to develop a nursery in Dartmouth Park. Borough Engineer to be authorised to invite tenders for the work.

**Newark, Notts.**—Sheffield Regional Hospital Board recommended to appoint Evans, Cartwright and Woollatt, 6, Clarendon Street, Nottingham, architects for linen store at Hawtonville Hospital.

**Newcastle upon Tyne.**—Newcastle Regional Hospital Board, are to extend their headquarters at Benfield Road, and sketch plans have been prepared. The Board's Chief Architect is P. H. Knighton.

City Council recommended to erect single-storey sheds of 40,000 sq. ft. on Newcastle Quay. Work is not expected to start for about 18 months. The city engineer is P. Parr.

**Newton Abbot, Devon.**—R.D.C. have approved plans for the erection of a church hall and Sunday school at Church Orchard, Chudleigh Knighton, for Rev. E. Powell-Price, 94 Wonford Street, Exeter.

**North Riding.**—C.C. to erect branch libraries at Haxby and Skelton. County architect is H. J. Knowles. County Hall, Northallerton, estimated cost £6,250 and £8,250, respectively; E.C. have approved sketch plans for new infant school at Tornaby-on-Tees, and tenders are to be obtained in due course. The Committee's architect is D. W. Dickenson, County Hall, Northallerton.

**Norwich.**—Town Planning Committee have approved in principle, layout plan for a pedestrian shopping centre at rear of Timberhill and Red Lion Street, for Valori Bros. and Mr. McLintock. Architects for the scheme are Skipper and Corless, 17 Cathedral Street.

**Nottingham.**—Sheffield Regional Hospital Board recommended to appoint K. W. Dale and Partners, 10 Dover Street, Piccadilly.

W.I, consulting engineers for twin operating theatre and pathology laboratory and replacement of boilers at Highbury Hospital; to appoint Eberlin and Partners, 3 College Street, architects for lavatory block at Ashwell ward at Sherwood Hospital.

**Oadby, Leics.**—Sheffield Regional Hospital Board recommended to appoint Wood and Weir, 64 Charles Street, Leicester, quantity surveyors for recreation room at Mansion House, Stretton Hall.

**Portishead, Som.**—U.D.C. have approved scheme for the provision of a swimming pool on land near the Battery Grounds. Estimated cost £30,000.

**Rotherham, Yorks.**—Steel, Peech and Tozer are to erect new apprentice training centre and technical block. Plans by Staff architect, ground exploration in progress. Estimated cost £245,000.

**Ruislip, Middx.**—C.C. recommended to approve, subject to M.E. approval, erection of new Bourne Primary School at Masson Avenue. Estimated cost £77,759.

**St. Albans, Herts.**—Hertfordshire Spastics Society propose, subject to the approval of the North West Metropolitan Regional Hospital Board, the erection of a treatment unit for spastics at St. Albans City Hospital.

**Saltsford, Corn.**—B.C. recommended to approve plans for the development of the Wearde area, including the provision of two new schools.

Sheffield Regional Hospital Board recommended to appoint Grimwade and Ainsley. Imperial Buildings, quantity surveyors for storage accommodation at Rotherham Hospital.

**Sleaford, Lincs.**—Sheffield Regional Hospital Board recommended to appoint G. M. Atkinson and Associates, Eagle Star House, Granby Street, Loughborough, consulting engineers for staff dining and day room accommodation and unit for adolescents at Rauceby Hospital.

**Southport, Lancs.**—B.C. recommended to approve plans and invite tenders for new toilet blocks at Crossens C.E. Primary School and Churchtown County Primary School.

**Stevenage, Herts.**—C.C. have granted £42,000 towards U.D.C.'s scheme for the construction of a swimming pool. Total estimated cost £154,000.

**Stockport, Ches.**—B.C. recommended to approve site at Lapwing Lane/North Way, Brinnington, for the erection of an aged persons' home; plans for the provision of a kitchen at Brindale Primary School, Essex Road, Brinnington, for E.C.

**Swansea.**—Borough Engineer to prepare plans for the provision of temporary shops at Pinkney Street, St. Thomas.

**Uxbridge, Middx.**—C.C. recommended to approve, subject to M.E. approval, phase 1 of extensions to Harefield Secondary School. Estimated cost £16,720.

**Witney, Oxon.**—T. P. Bennett and Sons, 43 Bloomsbury Square, London, W.C.1, are the architects and Gardiner and Theobald, 49 Bedford Square, London, W.C.1, are the quantity surveyors for the erection of a public house at Windrush Valley housing estate, for The Cheltenham and Hereford Breweries, Ltd., 265 High Street, Cheltenham.

**Worthing, Sussex.**—B.C. recommended to approve plans for the erection of additional classrooms, two storeys in height, at the Warren School, Warren Road, for The Warren School, Ltd., F. Trower, architect, West Winds, 80 Goldsmith Road, Worthing; subject to conditions, plans for the construction of a church at junction of Chesswood Road and Ham Road, for Very Rev. Monsignor D. P. Wall, H. Bingham Townner, architect, Hooke Hall, Uckfield, Sussex.

#### DEMOLITION

**Bristol.**—City Council recommended to apply for sanction to borrow £22,000 for demolition and site clearance in the central shopping area.

**Maidstone, Kent.**—B.C. recommended to invite tenders for the demolition of Mote House.

**Salisbury, Wilts.**—City Council have approved the demolition of Crane Lodge.

#### ELECTRICAL

**Nottingham.**—Sheffield Regional Hospital Board recommended to appoint Messrs. Gledes, 7 Clinton Terrace, Derby Road, quantity surveyors, for bed lift for St. Francis Hospital, Sherwood.

**Stoke-on-Trent, Staffs.**—Highways Committee have approved the installation of traffic lights at the junction of Hartshill Road, Liverpool Road and Church Street.

#### FENCING

**Cardiff.**—City Council recommended to approve the provision of fencing along the western boundary of Plymouth Great Wood. Estimated cost £1,700.

## GAS AND WATER SUPPLY

**Cookstown, Tyrone.**—R.D.C. propose the laying of about 23 miles of watermain as unemployment relief scheme next year. Estimated cost £35,000.

**Lincolnshire.**—Ministry have granted £10,500 towards the cost of a water supply scheme for an eight-mile hilltop region from Caistor to Walsby Top, for the North East Lincolnshire Water Board. Estimated cost £33,200.

**Middlesbrough, Yorks.**—Tees Valley and Cleveland Water Board are to negotiate a contract with John Laing and Son, Dalston Road, Carlisle, for the construction of the superstructure at Lartington filtration plant. The Board's chief engineer is T. S. R. Winter.

**Oxford.**—Ministry are to hold a public inquiry shortly into City Council's application to construct a reservoir at Farmoor. Estimated cost £5m.

**Rochdale, Lancs.**—B.C. recommended to apply for sanction to borrow £5,300 for laying approximately one mile of 6in. diameter water main from Milnrow Road, Littleborough, to Wild House Lane/Kiln Lane junction, Milnrow.

**Stratford-upon-Avon, War.**—B.C. recommended to apply for sanction to borrow £5,710 for laying water mains and services on Bridgetown, Cherry Orchard and Clifton Road estates; subject to Ministry approval, invite tenders for sinking a borehole at August Hill.

## HARBOURS, PIERS AND SEA DEFENCE WORKS

**Norwich.**—Ministry have approved scheme for a sea wall and groyne at Happisburgh Cart Gap, for the East Suffolk and Norfolk River Board. Estimated cost £30,893.

**Yarmouth, I. of W.**—Harbour Commissioners have approved a five-stage scheme for extension of the Quay. Estimated cost £41,000.

## HEATING AND VENTILATING

**Melton Mowbray, Leics.**—Sheffield Regional Hospital Board recommended to appoint Donald Rudd and Partners, 3 Rickmansworth Road, Watford, Herts., consulting engineers, for additional boiler at St. Mary's Hospital.

**Newark, Notts.**—Sheffield Regional Hospital Board recommended to appoint Evans, Cartwright and Wollatt, 6 Clarendon Street, Nottingham, architects for central heating nurses' training unit and physiotherapy department at Newark Hospital; to appoint Evans, Cartwright and Wollatt, architects, and E. G. Phillips, Son and Partners, 26 Annersley Grove, Nottingham, consulting engineers for centralisation of boiler plant at Newark Hospital.

**Nuneaton, War.**—Sheffield Regional Hospital Board recommended to appoint George Eastwood, 338 Higham Lane, architect, and Donald Rudd and Partners, 3 Rickmansworth Road, Watford, Herts., consulting engineers for replacement of boilers at High Grange rehabilitation centre, near Nuneaton.

**Sleaford, Lincs.**—Sheffield Regional Hospital Board recommended to appoint Myles-White and Associates, White Hart Street, Mansfield, architects, and G. M. Atkinson and Associates, Eagle Star House, Granby Street, Loughborough, consulting engineers for replacement of steam mains at Rauceby Hospital.

## HOUSING SCHEMES

**Arbroath, Angus.**—Dean of Guild Court have approved erection of five blocks of semi-detached houses and eight garages at Cliffburn Road, for B.C. Estimated cost £20,550.

**Barnes, Surrey.**—B.C. recommended to approve scheme for erection of 12 two-storey dwellings on Chertsey Court allotment site.

**Bournemouth, Hants.**—B.C. have granted conditional planning permission for the erection of a nine-storey block of 96 flats with garage accommodation at Parsonage Road, for the Taylor Woodrow Group, Southall, Middx.

**Brighton, Sussex.**—George Wimpey and Co., Ltd., Hammersmith Grove, London, W.6, propose the erection of 72 flats and 48 garages and a licensed restaurant on the site of the Montpelier Hotel, Montpelier Road.

**Bristol.**—Planning and Public Works Committee have approved plans for two 11-storey blocks of flats comprising 129 flats and maisonnettes, 68 store, laundry, etc., in the Barton Hill area.

**Canterbury, Kent.**—City Council have approved revised layout plan for the erection of 16 maisonnettes, five houses, four old people's bungalows, four flats and eight garages at Military Road.

**Cheadle, Staffs.**—R.D.C. have approved plans for 86 houses at Valley Road estate, for Axon and Brown (Etruria), Ltd., 13 Salem Street, Etruria, Stoke-on-Trent.

**Cheltenham, Glos.**—R.D.C. have prepared plans for 16 old people's dwellings with communal accommodation, and a block of six houses on the Barksdale site.

**Crook, Dur.**—U.D.C. to erect 42 houses, and eight bungalows on the Watergate estate, and 50 houses at Sunnybrow. Architects for the scheme are T. A. Page, Son and Hill, 75 King Street, South Shields.

**Dalkeith, Midlothian.**—Dean of Guild Court have approved erection of 48 houses and four garages at Hunter's Acres (Duke's Park), for B.C. Estimated cost £80,000.

**East Barnet, Herts.**—British Transport Commission have submitted to U.D.C. for approval plans for erection of 52 houses on Railway land at rear of Netherlands Road, New Barnet.

**Elstree, Herts.**—R.D.C. are preparing plans for the erection of eight flats for old or single people on land at junction of Crown Road, and Alban Crescent, Boreham Wood.

**Inverness.**—Dean of Guild Court have approved erection of 24 houses at Wyvis Place, for B.C. Estimated cost £31,894.

**Maidstone, Kent.**—B.C. recommended to submit to C.C. for approval, plans for the erection of 24 one-bedroom flats at Brishing Lane, Bell Road and outline application for two blocks of six-storeys (30 flats in all) on the site of the tennis courts, Hayle Road.

B.C. recommended to submit to C.C. for approval, subject to conditions, outline application for the erection of 36 dwelling-houses at Palace Farm, Allington Way, for Cox Brothers, 27 Mote Road, Maidstone.

**Monmouth.**—B.C. recommended to approve scheme to replace defective windows in all Cornish units houses. Estimated cost £4,100.

**Nottingham.**—Sheffield Regional Hospital Board recommended to appoint M. E. G. Felton, Oxford House, Oxford Street, quantity surveyor for house at Mapperley Hospital.

**Scunthorpe, Lincs.**—B.C. recommended to approve plans for 18 old people's flats at Stockhill Road.

**Swaffham, Norfolk.**—R.D.C. approved layout for 12 bungalows at Weeting.

**Tow Law, Dur.**—Plans have been approved for the erection of 28 houses at Dan's Castle, for the North-Eastern Housing Association, 5 Windsor Terrace, Newcastle upon Tyne. No contracts let. The Association have prepared their own plans.

**Tynemouth, Northumb.**—F. Hall, builder and contractor, Millview Drive, to convert a former hydro hotel Cullercoats into a block of luxury flats, four storeys high.

**Wantage, Berks.**—Ministry have approved R.D.C.'s housing programme comprising 32 dwellings at Grove, eight at East Ilsley, four at East Challow and three at Upton.

**Winsford, Ches.**—U.D.C. to submit to planning authority for approval, layout plans for the Grange housing estate.

**Worthing, Sussex.**—B.C. recommended to approve plans, subject to conditions, for the erection of one block of 36 flats, 10 storeys high with 38 garages at 103/107 Brighton Road, (A.259), for the Westminster Construction Co., Ltd.; Gotch and Partners, architects, 8 City Road, Finsbury Square, London, E.C.1; 30 flats, three storeys high and 30 garages at junction of Nelson Road and Drake Avenue, Field Place estate, for Thorogood and Sons, Ltd.; L. H. Fewster and Gamble, architects, 5 Liverpool Gardens, Worthing; outline application for the residential development of land by way of 100 flats in blocks of two, three and five storeys and garages at Princess Avenue, for R. H. Saunders; S. C. Phillips and Kirk, architects, Sterling Chambers, 32 Chapel Road, Worthing.

## PLAYING FIELDS, PARKS, ETC.

**Feltham, Middx.**—C.C. recommended to approve, subject to M.E. approval, scheme for construction of playing fields and laying out of grounds at Hanworth Secondary School for Boys. Estimated cost £5,250.

**Loughborough, Leics.**—Ministry have approved in principle first stage of the development of the Derby Road aerodrome site as playing fields, for B.C. Estimated cost £26,660.

**Uxbridge, Middx.**—C.C. recommended to approve, subject to planning approval, scheme for construction of three additional tennis courts at Vyners Secondary School, Ickenham. Estimated cost £4,333.

## RIVER AND FLOOD PREVENTION WORKS

**Birmingham.**—City Surveyor to prepare improvement schemes for the River Rea from Cannon Hill Park to Cartland Road, and the River Bourn from its confluence with the Rea and the culvert carrying it underneath the railway line at Bournville to prevent flooding. Estimated cost £500,000.

**North Walsham, Norfolk.**—Land Drainage Committee of the East Suffolk and Norfolk River Board to submit to Ministry for approval scheme for reclaiming parts of the North Walsham and Dilham Canal for agricultural use.

**Southwold, Suffolk.**—Land Drainage Committee of the East Suffolk and Norfolk River Board have approved, subject to Ministry approval, scheme for new piling on the

Reydon Marsh wall upstream of Reydon Quay on the River Blyth. Estimated cost £2,404.

## ROADS, BRIDGES AND SITE WORKS

**Barnes, Surrey.**—B.C. recommended to approve plans for making-up of Uplands Close and Stonehill Road, East Sheen.

**Belfast.**—City Council recommended to apply for loan sanction for £115,000 to meet the cost of resurfacing a number of thoroughfares with asphalt.

**Birmingham.**—City Council recommended to approve the reconstruction of footpaths in the city. Estimated cost £180,677.

**Bridlington, Yorks.**—B.C. recommended to approve in principle the construction of footpath and footbridge over railway at West Hill. Estimated cost £8,500.

**Bristol.**—City Council recommended to apply for sanction to borrow £7,500 for the extension of Leek Lane service court; approve scheme for the provision of bus turning circle at Ashton Court. Estimated cost £1,275.

City Council recommended to approve the widening of Days Road Bridge, Barton Hill, by the British Transport Commission and the carrying out of related road improvements. Estimated cost £22,840.

**Canterbury, Kent.**—City Council have approved a programme of major highway maintenance works for 1960-61 as follows: South Street, Dickens Avenue, part of Reed Avenue, Shelley Avenue, Conrad Avenue, part of Zealand Road, Cambridge Road, St. Dunstan's Street (Westgate to level crossing), Whitstable Road (London Road to Westgate Court Avenue), St. Thomas' Hill (lower section), St. Martin's Hill (lower section), St. Stephen's Road (level crossing to St. Stephen's Green), and various road junctions. Estimated cost £14,600.

City Council to submit to M.T. for grant aid scheme for A2 diversion and ring road including the widening and reconstruction of St. Peter's Place. Estimated cost £551,840.

**Cardiff.**—City Council recommended to proceed immediately with the preparation of detailed plans for the construction of a section of the docks access road to link Newport Road with the Rover Car Co. site at Pengam Moor. Estimated cost £200,000.

**Carmarthenshire.**—Roads and Bridges Committee to consider scheme for the construction of a two-mile road to convey coal from Pentremawr Colliery in the Gwendraeth Valley to the washery at Cynheidre. Estimated cost £120,000.

**Colchester, Essex.**—B.C. to invite tenders for the construction of a car park at The First, Maldon Road. Estimated cost £9,830.

**East Lothian.**—Sir Alexander Gibb and Partners, 43 Northumberland Street, Edinburgh, 3, are the consulting engineers for alterations and improvements of the road system in the vicinity of the B.M.C. factory at Bathgate, for C.C. Estimated cost £87,000. Work is scheduled to begin in August, and tenders are expected to be invited from seven selected contractors.

**Llanfairfechan, Caerns.**—U.D.C. have approved schemes for the repair of the district road section of Penmaen Park and the laying of tarmacadam along the whole of the Promenade. Estimated cost £1,000 and £2,000, respectively.

**Lowestoft, Suffolk.**—B.C. recommended to approve plans for making-up part of Clover Way.

**Newport, Mon.**—B.C. recommended to apply for sanction to borrow £4,500 for the widening of Pillmawr Road (north connection).

**Portsmouth.**—City Council recommended to approve plans for making-up of Castle Close.

**Scunthorpe, Lincs.**—B.C. recommended to approve plans for construction of an access road to cemetery and crematorium at Brumby Wood Lane and widening of Ashby Road Bridge.

**Surrey.**—Co. Highways Committee to prepare plans for improving the London-Portsmouth road (A.3) between Vine House and the Savoy Cinema, Cobham.

**Southport, Lancs.**—B.C. recommended to approve, for submission to the M.T., following schemes: Road improvements, Liverpool Road and Tulketh Street, estimated to cost £2,000; North Promenade—final surfacing of carriageway, £2,400; Scarisbrick New Road—reconstruction of bridge over Fine Jane's Brook, £1,700; reconstruction of Nevill Street—from Bath Street to the Promenade, £5,050, and construction of a lay-by in Eastbourne Road near its junction with Vaughan Road, £1,800.

Borough Engineer to be instructed to proceed with construction of a service road on land at the junction of Lord Street and Manchester Road, estimated cost £4,570, and footpath works, kerbing and preparation of carriageway in Links Avenue, £2,600.

**Thedwastre, Suffolk.**—R.D.C. to invite tenders for the construction of a road to serve 10 houses at Chapel Road, Wattisfield.

#### SEWERAGE, SEWAGE AND REFUSE DISPOSAL

**Brandon, Dur.**—U.D.C. will shortly consider tenders for carrying out a large main sewerage scheme in the Deerness Valley area. The work will include supply and laying of 8,300yd. of 6in. to 24in. sewers, construction of sewage works, and provision of pumping main. The consulting engineers are Waterhouse and Rounthwaite, 165 Westmorland Road, Newcastle upon Tyne.

**Dungannon, Tyrone.**—Ministry have approved the laying of trunk sewage main from Dungannon to Moygashel, for Joint Committee of Urban and Rural Councils. Estimated cost £80,000.

**Elham, Kent.**—R.D.C. have approved in principle drainage scheme for Sellindge, Stanford and Lympe. A. P. I. Cotterell and Son, 54 Victoria Street, London, S.W.1, are the consulting engineers for the scheme. Estimated cost £180,000.

**Glendale, Northumb.**—R.D.C. planning sewage disposal works at Lowick. Consulting engineers for the scheme are Waterhouse and Rounthwaite 165 Westmorland Road, Newcastle upon Tyne.

**Newton Abbot, Devon.**—R.D.C. have approved site at Bishopsteignton for replacement of existing sewage works.

**Pewsey, Wilts.**—R.D.C. to prepare sewerage schemes for Collingbourne Ducis and Collingbourne Kingston and also for North Tidworth and Wootton Rivers.

**Salisbury and Wilton, Wilts.**—R.D.C. considering scheme for sewerage Deptford and Fisherton de la Mere. Estimated cost £24,000.

**Thedwastre, Suffolk.**—Ministry have approved R.D.C.'s sewerage scheme for Hinderclay.

**Tonbridge, Kent.**—U.D.C. to submit to Ministry and C.C. for grant aid scheme for a new sewage works on the site of the present works at Vale Road. Estimated cost £500,000.

#### STREET LIGHTING

**Cumnor, Oxon.**—Parish Council have approved scheme for the improvement of street lighting throughout the village. Estimated cost £22,337.

**Rochford, Essex.**—Parish Council propose the conversion of 88 street lamps at West Street, Ashington Road, Hall Road, Dals Road, North Street, East Street and Stamburgh Road to sodium lighting.

**Scunthorpe, Lincs.**—B.C. recommended to apply for sanction to borrow £11,267 for major street lighting improvements during 1960-61.

## CONTRACTS

Full details of the Contracts marked \* will be found in our Advertisement Columns.

#### BUILDING AND DECORATING

**\*Aberystwyth, Cards.**—Reconstruction, etc., at the Town Hall, for B.C. Deposit £2 2s. Tenders by July 15.

**Aldershot, Hants.**—Construction of a single-storey building for public baths at Alfred Street, for B.C. Included in the work is the demolition of a former public house on the site. Documents from the office of the Borough Engineer and Surveyor, Town Hall, Aldershot, Deposit £2 2s. Tenders by July 11.

**Armagh.**—Richmont New School, for Co. E.C.: (a) The erection of this three-roomed school; (b) heating, plumbing and electrical installations (separate tender for each installation). Documents from G. D. Taylor, architect, 27a English Street, Armagh. Deposit £5. Tenders by July 5.

**Belfast.**—Erection and completion of a pavilion and equipment store at Ballywonder, Glengormley, for Royal Academy. Documents from Allan Dorman, chartered architect, 3 Elmwood Avenue, Belfast. Deposit £5. Tenders by July 4.

**Belfast.**—Following at Mater Infirmorum Hospital, Crumlin Road, for Board of Management: (a) New entrance; (b) extension to nurses' home. Documents from John A. Tynan, quantity surveyor, 33 Malone Road, Belfast. Deposit £5 5s. Tenders by July 5.

**Birmingham.**—Division of premises, construction of new lavatories and general repairs at Bullock Street, Birmingham, 7, for Estate Committee. Documents from the City Estates Officer, Bush House, 65 Broad Street, Birmingham, 1. Deposit £2 2s. Tenders by June 30.

**Bournemouth, Hants.**—Extensions to offices at 17 St. Stephen's Road, for B.C. Documents from the Borough Architect's Office (Room 106), Town Hall, Bournemouth. Deposit £2 2s. Tenders by July 11.

**Cambridge.**—Erection of a public convenience on Midsummer Common, for City Council. The building (floor area 800 sq. ft.) has brick walls, concrete floor and roof slabs, with tiled floors and cement-rendered internal walls. Applications to the City Surveyor, The Guildhall, Cambridge, by June 27. Deposit £2. Tenders by Aug. 3.

**Castleford, Yorks.**—External painting of 252 houses on the Ferry Fryston estate, contract 152, for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Castleford. Deposit £2 2s. Tenders by July 15.

**Cheltenham, Glos.**—Reconditioning and modernisation of the dwelling houses 20 Victoria Place and 18 Northfield Terrace, for B.C. Deposit £2 2s. each, payable to Corporation. Tenders by July 4.

**Clitheroe, Lancs.**—Erection of a cafe on the Market Ground, for B.C. Documents from the Borough Engineer, Town Hall, Clitheroe. Deposit £2. Tenders by July 1.

**Clitheroe, Lancs.**—Demolition of buildings and site clearance at Whalley Road, for B.C. Documents from the Borough Engineer, Town Hall, Church Street, Clitheroe. Deposit £2. Tenders by July 8.

**Cookstown, Tyrone.**—Exterior and interior painting of the church and assembly rooms, for the Committee, First Presbyterian Church. Documents from W. and M. Given, architects, 33 Molesworth Street, Cookstown, or W. A. Bownes, secretary to Committee, 36 Rathbeg, Cookstown. Tenders by July 19.

**Corby, Northants.**—External redecoration of shops and other commercial premises in the new town, for the Development Corporation. Applications to the General Manager, Corby Development Corporation, Spencer House, Corby, by July 1.

**Cornwall.**—Extensive repairs and renewals to the leadwork of the roofs of Roskear C.P. Infants' and Junior Schools, on a day-work basis, for C.C. Applications to the County architect, County Hall, Truro, by June 25. Tenders by July 9.

**Dartford, Kent.**—Following works at Joyce Green Hospital for Management Committee, to be completed by an agreed programme before Dec. 31, 1960: (a) External painting, nine wards, seven staff houses, five other departments; (b) internal decoration, six wards, one operating theatre, one other department; (c) internal washing down and cleaning, 15 wards, parts of several staff homes. Documents from E. J. M. Durrant, group secretary, The Bow Arrow Hospital, Dartford. Tenders by July 14.

**Devonshire.**—Erection of a one-pump fire station, at Combe Martin, for C.C. Applications to County Architect, 97 Heavitree Road, Exeter, by June 30. Deposit £2 2s., cheque payable to C.C.

**Docking, Norfolk.**—Erection of public conveniences at Beach Road, Holme-next-the-Sea, for R.D.C. Documents from G. E. Gibson, surveyor to the Council, Council Offices, Docking. Deposit £1 1s. Tenders by July 18.

**East Sussex.**—Erection of a three-storey office block of about 6,000 super. ft. at the Deer Paddock, Hailsham, for River Board. Applications to R. W. Fovargue, clerk of the Board, 1 Upper Lake, Battle, Sussex, by June 30.

**Edinburgh.**—Alterations to Balcarres Street L. and C. Dept., garages (area 2,300 sq. ft. approx.), for City Council, involving the following works on an all trades in one undertaking basis: (1) Mason and brick; (2) reinforced concrete; (3) roughcast; (4) bituminous felt; (5) plumber; (6) plaster; (7) painter. Applications to writing to the City Engineer, City Chambers, Edinburgh, 1 by June 21.

**\*Ellesmere Port, Ches.**—Contract 296, for B.C. Tenders by July 11.

**Enniskillen, Fermanagh.**—Erection of motor transport workshop, garage and engineering depot, Post Office, Mill Street, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Deposit £5. Plans also seen at Ministry of Labour and National Insurance, Local Office, Browne Square, Enniskillen. Tenders by July 4.

**Essex.**—Following, for C.C.: (1) Wicken House Residential Youth Centre, Wicken Bonhunt—adaptations, in traditional construction, to provide living accommodation at first-floor level, estimated cost £2,725; (2) East Mersea Youth Camp—warden's house in traditional construction and huttet toilet accommodation, estimated cost £5,000; (3) Chafford School, Ramsey, near Harwich—two staff houses in traditional construction, estimated cost £5,000. Separate applications to H. Conolly, county architect, County Hall, Chelmsford, by June 25.

**Forehole and Henstead, Norfolk.**—Following, for R.D.C.: (a) Provision and erection of structural steelwork in buildings proposed to be erected near Hethersett Station, Ketteringham; (b) installation of oil-fired heating system at the above; (c) electrical installation at the above. Applications to W. A. Jones,

engineer and surveyor, 158 Ber Street, Norwich. Deposit £2 2s. each, cheques payable to R.D.C. Tenders by July 25.

**Hambledon, Surrey.**—Improvements, consisting of installation of bathrooms, w.c.s and hot water systems at the following dwellings, for R.D.C.: Six, Alfoid; 12 Chiddingfold; seven, Ewhurst; and six, Shamley Green. Documents from the office of the Engineer and Surveyor, Council Offices, Bury Fields, Guildford. Deposit £1 1s., cheques payable to R.D.C. Tenders by July 11.

**Huntingdonshire.**—Following works at schools, for Co. E.C.: External painting—Alconbury, Earith British (kitchen and dining room), Fenstanton (kitchen and dining room), Gt. Raveley, Hemingford Grey, Holywell, Offord, Ramsey Abbey Grammar (with repairs to concrete floor in Abbey basement), Ramsey Heights, Ramsey Secondary Modern (first instalment), St. Ives Secondary Modern (first instalment), Sawtry, Southoe, Stanground (Chapel Street), Stibbington; internal redecoration—Brampton, Earith British (kitchen and dining room), Fenstanton (kitchen and dining room) Godmanchester (Park Lane), Holywell, Huntingdon Grammar (housecraft room, woodwork room, book store, music room (14), laboratories (11 and 12), ground floor corridor, entrance foyer, east (stairs), Orton Hall Special (part), Ramsey Secondary Modern (eight classrooms), Ramsey Spinning Infants' (part), St. Ives Secondary Modern (eight classrooms), Somersham Infants' Stanground (kitchen and stores), Stanground (Whitlesey Road), Warboys; playground works—Broughton, Earith, Gt. Gidding, Gt. Gransden, Huntingdon (V.C.), Kimbolton, Ramsey Town Infants', Ramsey Abbey Grammar (roadway and paths), Ramsey Secondary Modern (drives and paths), Orton Hall Special (frontal area), St. Ives Secondary Modern. Applications to S. M. Holloway, county architect, County Buildings, Huntingdon, by June 25.

**Lincolnshire.**—Painter work at Knowetop Special School, Motherwell, and Douglas J.S. School, for Co. E.C. Written applications to D. G. Bennerman, county architect, 34 Albert Street, Motherwell, by June 25.

**\*Leicester.**—Extensions to college of art and technology, phase 1, for City Council. Apply by June 30. Tenders by Aug. 16.

**\*Leicester.**—Re-erection of dressing cubicles, Ayleston Bath, for City Council. Deposit £1 1s. Tenders by Aug. 4.

**Leicestershire.**—Extensions to Market Harborough Welland Park Modern School, for C.C. Applications to County Architect, 123 London Road, Leicester, by June 27. Tenders by Aug. 8.

**Leyburn, Yorks.**—External painting of 60 Houses, for R.D.C.: Middleham, 16; West Witton, 10; Hunton, 14; Arrathorne, four; Thornton Steward, four; Bellerby, 12. Documents from the Public Health Inspector, Council Offices, Thornborough Hall, Leyburn. Tenders by July 15.

**Littlehampton, Sussex.**—External painting of 47 houses at Wickbourne estate, for U.D.C. Documents from the Engineer and Surveyor, Council Offices, Littlehampton. Deposit £1 1s. Tenders by July 19.

**Liverpool.**—Enclosing existing verandas with timber constructed walls, Dovecot Secondary Modern School, Grant Road, for City Council. Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by June 30.

**Liverpool, Lancs.**—Following, for South Liverpool Hospital Management Committee: Provision of a sterilising room at Ward 25. Sefton General Hospital and for the tilting of the floor in the boiler house and pump house at Mossley Hill Hospital. Documents from Garnet Chaplin, secretary to the Committee, Sefton General Hospital, Liverpool, 15. Tenders by July 12.

**Llanelli, Carmarthen.**—Painting of 32 B.I.S.F. houses at Tirgof housing site, Llan-gennech, for R.D.C. Documents from the Architect's Department, 2 Queen Victoria Road, Llanelli. Deposit £1 1s. Tenders by June 28.

**Lowestoft, Suffolk.**—Alterations comprising additional new office and staff cloakroom and cycle accommodation at Roman Hill Infant School canteen, Love Road, for B.C. Documents from the Borough Engineer's Offices, 49 High Street, Lowestoft. Deposit £1. Tenders by July 8.

**Lowestoft, Suffolk.**—Extensions comprising additional new staff cloakroom and cycle accommodation at Oulton Broad Primary School canteen, Gorleston Road, for B.C. Documents from the Borough Engineer's Office, 49 High Street, Lowestoft. Deposit £1. Tenders by July 8.

**Lowestoft, Suffolk.**—Following, for B.C.: (1) School of Building (part internal); (2) Morton Road School of Art (part internal); (3) College of Further Education (part internal); (4) Oulton Broad Primary School (internal); (5) Regent Road Art Centre (external and part internal); (6) Roman Hill Secondary School

(part external and part internal); (7) School of Navigation (part external and part internal). Documents from the Borough Engineer's Office, 49 High Street, Lowestoft. Tenders by July 8.

**Newcastle upon Tyne.**—Supply and installation of lighting protection equipment to 13 blocks of 15-storey flats now in course of erection in the City as follows, for City Council: (a) Three blocks at Church Street and three blocks at Eastfield Avenue (under one contract); (b) six blocks in Scotswood Road (Hawes Street) area and one block at Pottery Bank (under one contract). Applications in writing to the City Architect, 18 Cloth Market, Newcastle upon Tyne, 1. Tenders by July 5.

**Oldbury, Worcs.**—Erection of the new British Legion Headquarters, Windsor Road, for B.C. Applications to the Borough Engineer and Surveyor, Municipal Bank Chambers, Birmingham Street, Oldbury, by June 27. Deposit £2 2s. Tenders by July 15.

**Penryn, Corn.**—Exterior painting (and minor repairs) of the 51 unit houses at Greenwood Crescent, for B.C. Documents from the Borough Surveyor, Municipal Offices, Broad Street, Penryn. Tenders by July 4.

**Peterborough.**—Erection of 20 brick garages on the Eastfield estate, for City Council. Documents obtainable from City Engineer, Town Hall, Peterborough. Deposit £2. Tenders by July 11.

**Pontypool, Mon.**—Installation of bathrooms with new hot water systems in 24 houses at The Avenue, Garndiffaith, and 12 houses at Oakdale, Pontnewynydd, for U.D.C. Documents from the Architect, Council Offices, Pontymoile, Pontypool. Deposit £2 2s. Tenders by July 11.

**Ramsey, Hunts.**—Alteration, provision of bathrooms, w.c.'s, hot water systems, etc., to 156 houses in four contracts, for U.D.C. Documents from the Surveyor, Council Offices, 3 Bury Road, Ramsey. Deposit £1 1s. Tenders by July 2.

**Rhymney, Mon.**—Erection of a pair of lock-up shops, at Ty Coch, for U.D.C. Documents from the office of W. T. Bebb, architect, Manor House, Bank Square, Chepstow. Tenders by July 6.

**Ross and Cromarty.**—New transmitting stations for Independent Television Authority, as follows: Mongour—building, £40,000; approach Road, £15,000; Roskill—building and approach Road, £50,000. Applications to E. R. Collister and Associates, architects, 70 Victoria Street, London, S.W.1.

**Ross and Cromarty.**—Roughcasting of the following properties in the Island of Lewis, for C.C.: (1) Aird Schoolhouse; (2) Back School; (3) Bernera School and Schoolhouse; (4) Crowlister School and Schoolhouse; (5) Cromore School and Schoolhouse; (6) Duncarlaway School; (7) Fidigary School and Schoolhouse; (8) Graver School and Schoolhouse; (9) Kershader Schoolhouse; (10) Knockindhu Schoolhouse; (11) Lionel Old School; (12) Lochcrois-tean School and Schoolhouse; (13) Planasker School and Schoolhouse; (14) Tong School and Schoolhouse; (15) Valtos School and Schoolhouse. Applications to County Architect, Tulloch Street, Dingwall, by July 2.

**Rushden, Northants.**—External painting of 326 houses, for U.D.C. Documents from the Engineer and Surveyor, Council Buildings, Rushden. Tenders by July 4.

**Somerset.**—Erection of home for old people at Taunton, for C.C. Applications to R. O. Harris, county architect, The Crescent, Taunton, by June 27. Deposit £2 2s.

**Southend-on-Sea, Essex.**—Extensions at Eastwood High School for Girls, Rayleigh Road, Eastwood, for B.C., comprising the erection of a two-storey extension block of about 5,600 super. ft. of brick construction with a reinforced concrete floor and light roof decking and works incidental thereto. Applications to the Borough Architect, 30 Alexandra Street, Southend-on-Sea, by June 29, accompanied by details of similar works previously undertaken and names of architects from whom references may be obtained.

**Southend-on-Sea, Essex.**—Sports pavilion at Jones Memorial Recreation Ground, Eastern Avenue, for B.C., comprising the erection of a single-storey pavilion of about 3,000 super. ft. and works incidental thereto. Applications to the Borough Architect, 30 Alexandra Street, Southend-on-Sea, by June 29, accompanied by details of similar works previously undertaken and names of architects from whom references may be obtained.

**Stevenage, Herts.**—Erection of a covered swimming pool at St George's Way, with A.S.A. standards and including a smaller training pool, for U.D.C. Applications to E. J. Bowers, clerk of the Council, Council Offices, Orchard Road, Stevenage, before July 11.

**Stoke-on-Trent, Staffs.**—Conversion of approx. 120 waste water closets and two privies into water closets in various parts, for City Council. Documents from the Chief Public Health Inspector, St. Peter's Chambers, Glebe Street, Stoke-on-Trent. Tenders by July 8.

**Swale, Kent.**—Following works at the Council Depot, Church Lane, Newington, for R.D.C.: (a) Stores and office block—erection of external hollow walls and internal partition walls, together with foundations, substructures, door frames, doors and plastering required to complete a concrete-framed and asbestos roofed building; (b) block of eight garages—erection of external hollow walls together with foundations, sub-structures, door frames and doors required to complete a concrete-framed and asbestos roofed building. Documents from the Engineer and Surveyor, Whitehall, 48/50 Bell Road, Sittingbourne. Deposit £3 3s. Tenders by July 11.

**Tain, Ross.**—Alterations at Town Hall, Stafford Street, for B.C., comprising: (a) Dry rot eradication; (b) demolition and reconstruction of roof; (c) erection of new balcony, flooring, stage entrance foyer, dressing room accommodation, etc. Documents from Geo. Gordon and Co., architects, 6 Queensgate, Inverness. Plans also seen at the office of H. W. Munro, town clerk, Council Chambers, Tain. Tenders by June 29.

**\*Uxbridge, Middx.**—Painting of lamp standards, etc., for B.C. Deposit £2 2s. Tenders by July 7.

**West Hartlepool, Dur.**—Alterations and additions to the High School for Girls, Eldon Grove, for B.C. Documents from the office of L. Auton, architect, Regent Buildings, York Road, West Hartlepool. Tenders by Aug. 25.

**West Riding.**—Internal and external painting at various schools in the Batley and Morley divisions, for C.C. Documents from J. E. Littlewood, divisional education officer, Education Office, Morley. Tenders by July 1.

**West Riding.**—Provision and erection of suspended ceilings at Wortley C.E. Controlled School, for C.C. Documents from S. Wright, divisional education officer, 50 Huddersfield Road, Barnsley. Tenders by July 1.

#### CLOTHING AND TEXTILES

**Airdrie, Lanarks.**—Supply of clothing for the Burgh Police Force. Documents from Chief Constable, Anderson Street, Airdrie. Tenders by July 16.

**Blackpool, Lancs.**—Supply of uniform clothing for the ambulance personnel, for Corporation Transport. Documents from the Transport General Manager, Blundell Street, Blackpool. Tenders by July 11.

**Bolton, Lancs.**—Supply of uniform clothing to Welfare and Health departments, for B.C. Documents from Medical Officer of Health, Civic Centre, Bolton. Tenders by July 15.

**East Riding.**—Supply of uniforms for the ambulance health visiting and domiciliary nursing staffs, for C.C. Documents from the County Medical Officer, County Hall, Beverley. Tenders by July 4.

**Edinburgh.**—Supply of 300 tunics (battle-dress style) for the Lighting and Cleansing Department, for City Council. Documents from the Supplies Officer, Corporation of Edinburgh, 1 Glenlockhart Road, Edinburgh. Tenders by June 30.

**Mountain Ash, Glam.**—Supply of approx. 120 fawn double texture raincoats and matching sou'westers, for U.D.C. Documents from the Engineer and Surveyor, Town Hall, Mountain Ash. Tenders by June 28.

#### DEMOLITION

**Bradford, Yorks.**—Demolition and clearing of the following property, for City Council: Dwelling-houses 510 and 512 Bowling Old Lane, and 709 Manchester Road. Documents from the City Engineer and Surveyor, Town Hall, Bradford. Tenders by June 28.

**Hawarden, Ches.**—Demolition of 11 houses and other buildings, Derby Road, Caergwrle, near Wrexham, for R.D.C. Applications to Architect and Surveyor, Council Offices, Hawarden, by June 27. Tenders by July 9.

**Newmarket, Cambs.**—Demolition of properties and offers for the credit of materials at several sites, for U.D.C. Documents from Engineer and Surveyor, Severals House, Newmarket. Tenders by June 30.

**West Lothian.**—Demolition of Mavcrete houses and removal of concrete rafts at Greengrigg, Harthill, for C.C. Applications to John Calder, county clerk, County Buildings, Linlithgow, by June 30.

#### ELECTRICAL

**Cookstown, Tyrone.**—Electrical installations to new housing schemes at Stewartstown and Blackhill, for R.D.C. Documents from W. and M. Given, Molesworth Street, Cookstown. Tenders by July 4.

**East Riding.**—Installation of electrical services at the county garage being erected in Beverley, for C.C. Documents from the County Architect, Council Hall, Beverley. Tenders by June 30.

**Hillsborough, Down.**—Following, for R.D.C.: (a) Electrical installation; (b) mechanical services installation, in the new offices, for R.D.C. Documents from McCandless and

Barton, consulting engineers, 6 Murray Street, Belfast. Deposit £3 3s. each. Tenders by July 4.

**Llangollen, Denbighs.**—Electrical installations in 20 houses now in course of erection at Maes Pengwern, for U.D.C. Applications in writing to H. G. Fawcett, surveyor, Town Hall, Llangollen. Deposit £2 2s. Tenders by July 2.

**Manchester.**—Electrical installation to day nursery at Daisy Bank Road, Victoria Park, for City Council. Documents from City Architect, P.O. Box 488, Town Hall, Manchester. Tenders by July 1.

**Middlesbrough, Yorks.**—Stripping existing wiring and rewiring 24 existing fittings and installation of six new fluorescent light fittings, at Dacre Street Baths, for B.C. Documents from the Borough Engineer and Surveyor, Municipal Buildings, Middlesbrough. Tenders by June 30.

**N. Ireland.**—Plumbing and electrical installations in 46 dwellings at Rathcoole 8C (extension), for Housing Trust. Documents from offices of the Trust, 12 Hope Street, Belfast, 12. Tenders by June 30.

**Peterborough.**—Electric lighting and power installations to 34 dwellings on Gunthorpe estate and four dwellings at Keeton Road, for City Council. Documents from the City Engineer, Town Hall, Peterborough. Tenders by July 1.

**Pontsticill, Glam.**—Conversion, from d.c. to a.c., of the electrical installation in the treatment works of the Taf Fechan Water Supply Board at Pontsticill, near Merthyr Tydfil, work include the following: (1) Complete overhaul and conversion, from d.c. to a.c., of existing goods lift; (2) supply only of two self-priming water pump sets, complete with motors, capacity 500 g.p.m. against 50ft. head; (3) supply only of two air compressor sets, with slip ring motors, capacity 50 cu. ft. per minute at 100 p.s.i.; (4) supply only of 415-V T.P. and N. switchboard comprising one 150-A circuit breaker, motor starters up to 15-h.p., and sundry switch-fuses; (5) supply only approximately 250yd. of 3½ core 0.1 sq. in. P.I.L.C.S.W.A. cable and cable cover tiles; (6) supply only of several small geared motor units; (7) supply and installation of one 50-kW water turbine alternator set, complete with switchboard; (8) supply and installation of all cabling, etc., for the re-wiring of existing equipment and the wiring of new equipment. Applications to Binnie, Deacon and Gourley, consulting engineers, Artillery House, Artillery Row, London, S.W.1.

**Sevenoaks, Kent.**—Installation of improved lighting and other electrical wiring and equipment at Council Offices, Inglewood, Oak Hill Road, for R.D.C. Documents from the Engineer and Surveyor, Inglewood, Oak Hill Road, Sevenoaks. Deposit £1 1s. Tenders by July 4.

**Sunderland, Dur.**—Electrical installation to Monkwearmouth community centre, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Tenders by July 14.

#### FENCING

**\*Bedfordshire.**—Supply and erection of fencing, for C.C. Deposit £2. Tenders by July 1.

#### GAS AND WATER SUPPLY

**Blackpool, Lancs.**—Construct softening plant for the treatment of water obtained from their Broughton borehole scheme, for Fylde Water Board. Applications, giving particulars of similar work carried out during recent years, to Frank Law engineer to the Board, Sefton Street, Blackpool, by July 16. Tenders by Jan. 6, 1961.

**\*Braintree and Bocking, Essex.**—Codham Mill water scheme, contract 8, pipeline, for U.D.C. Deposit £10. Tenders by July 25.

**Lisburn, Antrim.**—Laying of approximately 4,200yd. of 12in. diameter spun-iron gas main from the Lisburn gas supply boundary to the Lisburn Gas Works, for U.D.C. Documents from the office of the Town Clerk, Town Hall, Lisburn. Deposit £3. Tenders by July 21.

**Sligo, Eire.**—Construction of a water supply scheme in the vicinity of Grange, for C.C. The work comprises the following: Reinforced concrete service reservoir, 125,000 gallons capacity; reinforced concrete reservoir of 50,000 gallons capacity; intakes; purification works. The laying of the following mains complete with all necessary fittings and all ancillary works: 13,734 lin. yd. of 4in. diameter main; 1,126 lin. yd. 5in. diameter main; 674 lin. yd. 6in. diameter main. Documents from Thomas I. O'Connor, consulting engineer, Commercial Buildings, Dame Street, Dublin. Deposit £26 5s. Tenders by July 29.

**Slough, Bucks.**—Laying of 3in., 4in. and 6in. water mains and appurtenant works from Aug. 2, 1960, to March 31, 1961, within the Council's statutory area of water supply, for B.C. Documents from the Borough Engineer Town Hall, Slough. Deposit £2 2s. Tenders by July 4.

**Thirsk, Yorks.**—Supply and laying of the following, for R.D.C.: 4,500 lin. yd. of 9in. diameter class C pipes; 19,450 lin. yd. of 6in. diameter class C pipes in three mains; 5,465 lin. yd. of 3in. diameter class C pipes in two mains, together with valves, fittings and other ancillary works as extensions to the existing mains network. Documents from W. A. Wilkinson, clerk to Thirsk R.D.C., Council Offices, Thirsk. Deposit £3 3s. Tenders by July 9.

**\*West Kesteven.**—Booster station, Wilsford Heath, for R.D.C. Deposit £5 5s. Tenders by July 9.

**Williton, Som.**—Clatworthy water supply scheme, contract 10, for R.D.C., including the construction of a 350,000-gallon capacity service reservoir in reinforced concrete at Grove Williton. The reservoir will consist of two parts, each 45ft. by 60ft., divided by a reinforced concrete wall, the depth of water being 10ft. 9in. The reservoir will have an earthwork embankment which, together with the roof, will be covered with soil and sown with grass seed; meter house and recording apparatus; combined overflow and scour pipe; site works; provision and fixing of all necessary valves, ironwork, manholes, etc.; ancillary works. Documents from the office of S. E. Balch, engineer and surveyor, Council Offices, Fore Street, Williton, Taunton. Deposit £3 3s. cheque. Tenders by July 25.

#### HEATING AND VENTILATING

**Brierley Hill, Staffs.**—Supply and fixing of heating apparatus (coke or oil fired) in greenhouses at King George V Park, Wordsley, for U.D.C. Documents from the Engineer and Surveyor, Civic Buildings, Brierley Hill. Tenders by June 30.

**Camberwell.**—Removal of existing calorifier and redundant piping, and the fabrication, installation and testing of a hot water receiver and all connections at the baths, for B.C. Documents from Borough Engineer and Surveyor, Town Hall, Camberwell, S.E.5. Tenders by June 28.

**Enniskillen, Fermanagh.**—Low pressure hot water heating, hot, cold and drinking water service installations at additional sleeping accommodation, R.U.C. Depot, Enniskillen, for Ministry of Finance. Documents from Room 103, Law Courts Building, Belfast, 1. Tenders by July 8.

**Glossop, Derbys.**—Installation of 25 immersion heaters to Woodcock Grove property, for B.C. Documents from the Borough Surveyor's Office, Municipal Buildings, Glossop. Tenders by July 1.

**Liverpool.**—Supply and fixing new domestic hot water installation, Salisbury County Primary School, for City Council. Documents from the City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by June 30.

**Sunderland, Dur.**—Heating, etc., installation to Monkwearmouth Comprehensive School, for B.C. Documents from Borough Architect, Grange House, Stockton Road, Sunderland. Tenders by July 14.

#### HOUSING SCHEMES

**Abercarn, Mon.**—Following, for U.D.C.: Construction in pairs of 152 of the tenderer's type of low-cost three-bedroom four-person houses at the Trinant housing site, Aberbeeg, preliminaries rafting and external works being as specified by the Council, and the tenders to be for all work in constructing the houses and work connected therewith. Documents from the Engineer, Council Offices, Abercarn. Deposit £3 3s. Tenders by July 11.

**Andover, Hants.**—Two blocks of six old people's bungalows and site works at The Drive, for B.C. Documents from the Borough Surveyor, Municipal Offices, Beech Hurst, Weyhill Road, Andover. Deposit £2 2s. Tenders by July 11.

**Ashby-de-la-Zouch, Leics.**—Two pairs of houses on the Ravenstone Road Site, Heather for R.D.C. Documents from Pick, Everard, Keay and Gimson, chartered architects, 6 Millstone Lane, Leicester. Deposit £2 2s. Tenders by July 4.

**Basingstoke, Hants.**—Twelve houses and site works at Belle Vue Road, Basing, for R.D.C. Applications to A. S. Rew, clerk, Eastlands, London Road, Basingstoke, by July 4.

**Berkshire.**—Erection of standard police houses in traditional brick construction at the following sites, for C.C.: Six houses, Northumbria Road, Cox Green, Maidenhead; two houses, Perry Croft, Windsor; two houses, Longmead, Dedworth, Windsor. Documents from the County Architect, Wilton House, Parkside Road, Reading. Deposit £2 2s. Tenders by July 5.

**Bingley, Yorks.**—Twenty-seven bed-sitting flats, eight one-bedroom flats, one warden's flats, in two two-storey blocks, together with outbuildings, roads, drainage and services, at Poplar House, Bradford Road, for U.D.C.

Documents from the Surveyor and Architect, Town Hall, Bingley. Deposit £2 2s. Tenders by July 11.

**Bristol.**—Four larger type traditional houses and eight garages at Kendon Drive, Southmead, for City Council. Applications to City Architect, Council House, Bristol, 1, by June 27.

**Chatham, Kent.**—Thirty-two houses at Weeds Wood estate, Chatham, for B.C. Written applications to Borough Engineer, Town Hall, Chatham, enclosing a statement of recent contracts carried out. Deposit £2 2s. Tenders by July 12.

**Chesterfield, Derbys.**—Seventy traditional-type brick-built dwellings on the Peveril estate, for B.C. Documents from the office of the Borough Engineer and Surveyor, Town Hall, Chesterfield. Deposit £2 2s. Tenders by June 28.

**Chigwell, Essex.**—One four-storey block containing 12 flats, and one two-storey block containing eight flats, at Love Lane, Woodford Bridge, to be erected about Sept., for U.D.C. Applications to Tooley and Foster, architects, Midland Bank Chambers, Buckhurst Hill, by July 1. Unless similar contracts recently executed for the Council or their architects, names of two architects for whom similar schemes have been executed and to whom reference may be made, must be provided.

**Colchester, Essex.**—Seventy-eight units of accommodation on the Greenstead site, for B.C. Documents from J. S. Orchard, borough engineer, 1 West Stockwell Street, Colchester. Deposit £10 10s. Tenders by July 11.

**Cookham, Berks.**—Block of four flats adjoining Sawyers Crescent, Woodlands Park, White Waltham, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Oaklands, 1 Bath Road, Maidenhead. Deposit £2 2s. Tenders by July 14.

**Cookham, Berks.**—Erection of a block of four flats adjoining Sawyers Crescent, Woodlands Park, White Waltham, for R.D.C. Documents from the Engineer and Surveyor, Council Offices, Oaklands, 1 Bath Road, Maidenhead. Deposit £2 2s. Tenders by July 14.

**\*Crawley, Sussex.**—Dwellings and garages, for Development Corporation. Apply by July 2.

**Crosby, Lancs.**—Eleven pairs of semi-detached houses, with garages, in Cranfield Road and Edgemoor Drive, for B.C. Documents from the Borough Engineer and Surveyor, Town Hall, Waterloo, Liverpool, 22. Tenders by June 29.

**Croydon, Surrey.**—Four houses and 24 flats in two-, three- and four-storey blocks at Leighton Street, Sumner Gardens, and St. James's Road, for B.C. Applications to the Borough Engineer, Town Hall, Croydon. Tenders by July 5.

**Darlaston, Staffs.**—Following at Bentley housing estate, section 14, contract 17AC, for U.D.C.: Houses—12 pairs; flats—four blocks of two, and three blocks of four; garages—11 brick and 48 concrete. Applications to C. W. Frost, engineer and surveyor, Victoria Park, Darlaston. Deposit £2 2s. Tenders by July 11.

**Dartford, Kent.**—Following, for R.D.C.: Four aged persons' flats, Alban Crescent, Farningham; four aged persons' flats, Lane End, Darenth; 20 houses and flats, Kirby Road, Stone. Documents from the Engineer and Surveyor, White Oak, Swanley, Kent. Tenders by July 18.

**Deal, Kent.**—Erection of four old persons' dwellings and six garages, for B.C. (Refer to our issue of June 2, page 1117). Deposit £2 2s. Tenders by July 4.

**Dungannon, Tyrone.**—Demolition of existing buildings and the erection and completion of 44 houses, 11 garages and ancillary works at Castle Lane, Caledon, for R.D.C. Documents from Wright and Partners, quantity surveyors, 79 Botanic Avenue, Belfast. Deposit £3 3s. Plans seen at the offices of the Architect to the Council, Dungannon R.D.C. Offices, Dungannon. Tenders by July 7.

**\*Flint.**—Eighty-seven dwellings, for B.C. Deposit £3 3s. Tenders by July 11.

**Frome, Som.**—Eighteen traditional houses 12 three-bedroom, six single-storey together with ancillary services, paths, fencing, etc., and including the preparation and formation of approximately 480 super. yd. of site approach road with kerbs and pavements at Rockabella Lane, Rode, for R.D.C. The site will also include a block of 12 garages with forecourt and approach road. Applications to Humphrey Goldsmith and Partners, architects, 18 Gay Street, Bath, by June 25. Deposit £2 2s.

**Haverfordwest, Pems.**—One block of 12 flats at City Road housing estate, for B.C. Documents from the Borough Surveyor, Picton House, Haverfordwest. Tenders by June 27.

**Hazel Grove and Bramhall, Ches.**—Twenty flats, Commercial Road, Hazel Grove, for U.D.C. Applications to the Clerk, The Council House, Hazel Grove, by June 29. Deposit £3 3s. Tenders by July 26.

**Holland.**—One bungalow at Royce's Farm, Blackhole Drive, Spalding, for C.C. Documents from G. T. Bailey, county land agent, Oxford Street, Boston. Tenders by June 30.

**Hungerford, Berks.**—Eighteen houses in Park Way, for R.D.C. Documents from E. L. Hawkins, surveyor. Deposit £2, cheque payable to R.D.C. Tenders by June 29.

**Kendal, Westmor.**—Six flats in Caroline Street, for B.C. Documents from the Borough Engineer, Municipal Offices, Lowther Street, Kendal. Deposit £2. Tenders by July 13.

**Kirkby-in-Ashfield, Notts.**—Twenty-four one-bedroom bungalows with all appurtenant works at Greenwood Drive housing estate, for U.D.C. Documents from the office of P. G. Shaw, surveyor, Public Offices, Kirkby-in-Ashfield. Deposit £3 3s. Tenders by July 5.

**Leek, Staffs.**—Following works, for U.D.C.: Windsor Drive (Contract 62) two pairs houses, type L, one block four houses, type U; rear of Hamil Drive/Mill Street (78) one block four houses, type U, together with appurtenant siteworks. Documents from J. A. Gilchrist, engineer and surveyor, Town Hall, Leek. Deposit £3 3s., each contract. Tenders by June 27.

**Leicester.**—One hundred and twenty-two brick dwellings at Nether Hall estate, for City Council. Documents from J. H. Lloyd Owen, city architect, Municipal Offices, Charles Street, Leicester. Deposit £2, cheques payable to City Treasurer. Tenders by July 7.

**Leicester.**—Sixty dwellings (five blocks of three-storey brick flats) at Evington House estate, for City Council. Documents from J. H. Lloyd Owen, city architect, Municipal Offices, Charles Street, Leicester. Deposit £2. Tenders by July 7.

**Llandeilo, Carmarthen.**—Erection of flats at the undermentioned sites, for R.D.C.: Woodfield Road, Llanybyddie—eight two-bedroom; Treforis, Betws—four two-bedroom; Parc Avenue, Capel Hendre—four two-bedroom. Documents from Norman E. Evans, engineer and surveyor, Council Offices, Crescent Road, Llandeilo. Deposit £2 2s. Tenders by July 15.

**Llanelli, Carms.**—Ten flats at Lewis Crescent, Penceiliogi, as follows, for R.D.C.: Two blocks of four flats; one block of two flats, together with site works therefor. Documents from the Council's Architect, 2 Queen Victoria Road, Llanelli. Deposit £2 2s. Tenders by July 5.

**Louth, Lincs.**—Four two-bedroom bungalows at Fulstow, including site works, drainage system, etc., for R.D.C. Documents from G. R. A. Mack, architect, 2 New Street, Louth. Deposit £3 3s. Tenders by June 27.

**Louth, Lincs.**—One pair of two-bedroom bungalows at Grimoldby, including site works, drainage system, etc., for R.D.C. Documents from G. R. A. Mack, architect, 2 New Street, Louth. Deposit £3 3s. Tenders by June 27.

**Luton, Beds.**—Following on the Lewsey Farm estate, for B.C.: (1) 197 dwellings and 118 garages in one contract; or (2) erection of dwellings within this group for either—(a) 26 dwellings, including three blocks of six three-storey flats; or (b) 27 dwellings and four brick-built garages; or (c) 21 dwellings and four brick-built garages; or (d) 30 dwellings, 58 prefabricated and four brick-built garages; or (e) 44 dwellings and 40 prefabricated garages; or (f) 49 dwellings and eight brick-built garages; or (g) a combination of any of these groups. Applications to the Borough Architect, Town Hall, Luton, by July 1.

**Manchester.**—Three hundred and fifty-one dwellings at Councillor Lane, Cheadle, for City Council. Documents from the Director of Housing (Room 228), Town Hall, Manchester, 2. Tenders by June 27.

**Manchester.**—Following, for City Council: Contract 296, Rose Hill, Marple, 240 dwellings; 282, Harpurhey, 142 dwellings. Documents from the Director of Housing, Town Hall, Manchester. Tenders by June 27.

**Middlesbrough, Yorks.**—Following, for B.C.: (a) Twenty houses at Pallister Park; (b) 39 houses at Easterside. Documents from Borough Engineer, Council Offices, Middlesbrough. Deposit £2 2s. each. Tenders by June 27.

**Midhurst, Sussex.**—External painting of 110 houses situated in various parishes, for R.D.C. Documents from the Housing Manager, Council Offices, Midhurst. Tenders by June 27.

**New Mills, Derbys.**—Twenty-three aged persons' bungalows, communal sitting-room, laundry, and warden's house, for U.D.C. Applications to J. Bailey, clerk of the Council, Town Hall, New Mills, near Stockport, by June 27.

**Northallerton, Yorks.**—Twenty-two houses and eight flats at Forest Road estate, for U.D.C. Documents from the office of the Clerk of the Council, 72 High Street, Northallerton. Plans also seen at the offices of Brierley, Leckenby and Keighley, architects, 10 Lendal, York. Tenders by July 1.

**Northern Ireland.**—Sixty-two dwellings, together with ancillary works, at Greenisland

2. for Housing Trust. Documents from the offices of the Trust, 12 Hope Street, Belfast, 12. Deposit £3. Tenders by June 28.

**Northern Ireland.**—Forty dwellings and 29 garages at Downpatrick (Kary Hill), together with ancillary and engineering works, for Housing Trust. Documents from the offices of the Trust, 12 Hope Street, Belfast, 12. Deposit £3. Tenders by July 8.

**Northern Ireland.**—Twenty dwellings, together with ancillary and engineering works at Portaferry (Little Back Lane), for Housing Trust. Documents from the Offices of the Trust, 12 Hope Street, Belfast, 12. Deposit £3. Tenders by July 5.

**St. Neots, Hunts.**—Nineteen dwellings and Site works, Shirdley House estate, for U.D.C. Documents from H. H. Thomas, clerk of the Council, Council Offices, Huntingdon Street, St. Neots. Tenders by July 13.

**Salisbury and Wilton, Wilts.**—Following, for R.D.C.: (a) Four houses and six bungalows, together with site works, including drains, water mains, paths, fencing, road and sewage disposal plant at Broadchalke; and (b) two houses, together with site works, including drains, water mains, paths and fencing, at Berwick St. James. Applications to C. S. Brown, clerk of the Council, Council Offices, 26 Endless Street, Salisbury. Deposit £2 2s. each. Tenders by July 14.

**Seaham, Dur.**—Erection at Station Road, Seaham, of 64 one-bedroom, two-storey flats, for U.D.C. Documents from the Engineer and Surveyor, Cliff House, Seaham. Deposit £3 3s. Tenders by June 27.

**Selby, Yorks.**—Thirty-six houses, 12 bungalows, 25 garages on sites on Stainer Wood estate and Flaxley Road estate, Selby, for U.D.C., comprising four terraces of six three-bedroom houses; six pairs of three-bedroom houses; three terraces of four single-bedroom bungalows; two blocks of eight garages and one block of nine garages. Applications to G. L. Thompson, architect, 22 Park Street, Selby. Deposit £2 2s. Tenders by June 27.

**Sevenoaks, Kent.**—Three blocks of four ageing persons' flats and the demolition of eight cottages, Halstead, for R.D.C. The work is to be carried out in three stages. Documents from the Engineer and Surveyor, Inglewood, Oak Hill Road, Sevenoaks. Deposit £2 2s. Tenders by July 19.

**Sittingbourne and Milton, Kent.**—Two blocks of H type flats four flats per block and three pairs of P type houses at Rectory Road, contract 16, for U.D.C. Documents from the Engineer and Surveyor's Office, 89 London Road, Sittingbourne. Deposit £3 3s. Tenders by July 5.

**Staines, Middx.**—Eight pairs of semi-detached houses and 14 garages, section M, Town Lane, Stanwell, for U.D.C. Documents from the Engineer and Surveyor, Shortwood House, 240 London Road, Staines. Deposit £2 2s. Tenders by June 30.

**Staines, Middx.**—Eight pairs of semi-detached houses and 32 garages, section N, Town Lane, Stanwell, for U.D.C. Documents from the Engineer and Surveyor, Shortwood House, 240 London Road, Staines. Deposit £2 2s. Tenders by June 30.

**Sunderland, Dur.**—Six one-bedroom aged persons' bungalows and 14 two-bedroom bungalows at Grange Road, Castletown, for R.D.C. Documents from the Surveyor, 2 The Esplanade, Sunderland. Deposit £2 2s. Tenders by July 19.

**Tavistock, Devon.**—Twenty-two dwellings, including site works, at Drakes Park, Bere Alston, for R.D.C. Documents from Rossington and Foxden, chartered architects, surveyors, Drake Road, Tavistock. Deposit £3 3s. Tenders by July 7.

**Thedwastre, Suffolk.**—Following, for R.D.C.: Ashfield Magna, two bungalows; Rattlesden, six; Walsham-le-Willows, two; Woolpit, eight. Applications to Mitchell and Weston, architects, 38 Churchgate Street, Bury St. Edmunds, by June 25. Deposit £2 2s. Tenders by July 6.

**Totnes, Devon.**—Sixteen houses and 33 bungalows on the Culverdale estate, for B.C. Documents from Joseph W. Smith, borough engineer and surveyor, Municipal Offices, Totnes. Deposit £2 2s. Tenders by July 15.

**Towcester, Northants.**—Modernisation of houses, for R.D.C. Contract 16—four bungalows at Church Way, Whittlebury, removal of combination grate and provision of hot water installation by means of Redfyr back-boiler, the provision of bath, lavatory basin and sink together with sundry items of redecoration. Documents from Geo. Berridge, surveyor, 163 Watling Street West, Towcester. Deposit £2 2s. Tenders by July 7.

**Wandsworth.**—Three-storey block of 23 flats at Streatham High Road, for B.C. Applications giving details of experience, plant and technical and supervisory staff available together with names of two technical and two financial referees, to J. Noel Martin, town clerk, Municipal Buildings, Wandsworth, London, S.W.18. by June 29.

**Wantage, Berks.**—Twelve permanent bungalows and site works, for U.D.C. Documents from W. G. Stanbrook, architect, 37a Bartholomew Street, Newbury. Deposit £3 3s., cheque payable to U.D.C. Tenders by July 1.

**\*Warwick.**—Houses and bungalows—East End clearance area, phase 1, for B.C. Deposit £2 2s. Tenders by July 5.

**Watford, Herts.**—Twenty-seven old persons' bungalows on the Meriden estate, for B.C. Applications to F. C. Sage, borough engineer and surveyor, Town Hall, Watford, by 10 a.m., June 27. Deposit 2 2s. Tenders by July 21.

**Welwyn Garden City, Herts.**—Two hundred and twenty-two houses, 40 two-storey flats and approximately 100 brick garages, for U.D.C. Applications should be made in writing with full particulars, to Charles W. Fox, architect, National Provincial Bank Chambers, Stonehills, Welwyn Garden City, Herts., before July 5.

**Weobley, Herts.**—Thirty-two Homeville traditional housing units, and the construction of roads, footpaths, foul and surface water sewers, and all appurtenant works at Burton Wood, for R.D.C. Documents from R. C. Hutchison, clerk of the Council, Council Offices, Whitehill House, Weobley. Deposit £3 3s. Tenders by July 16.

**West Lothian.**—Following trades in respect of 18 houses to be erected at Greenrigg, Harthill, for C.C.: Excavator, brick, etc., work; carpenter and joiner work; glazier work; slater and roughcast work; plaster and cement works; electrical work; plumber work; and painter work. Applications to John Calder, county clerk, County Buildings, Linlithgow, by June 30.

**\*Weston-super-Mare, Som.**—Replacement of temporary bungalows with permanent housing units at Bournville housing estate, for B.C. Deposit £2 2s. Tenders by July 21.

**Widnes, Lancs.**—Select list of contractors for house building, for B.C. This list will cancel all previous lists and the Council will invite tenders only from contractors whose names are included in the list. Contractors will be required to conform to the recommendations of the Monopolies Commission in relations to restrictive practices. Applications to the Borough Architect, Brendan House, Widnes Road, Widnes, by 10 a.m., July 4.

**Woodbridge, Suffolk.**—Forty-eight flats in Castle Street, as follows, for U.D.C.: (a) Two blocks of 12, type 1; (b) three blocks of six, type 3; (c) one block of six, type 2; (d) site preparation work. Documents from the Surveyor's Department, Eden Lodge, Woodbridge. Deposit £2 2s. Tenders by June 30.

**York.**—Following, for City Council: (a) 50 dwellings at Fossway, York; (b) two-storey warehouse at Albion Wharf, Skeldergate, York. Documents from E. Firth, city architect, 8 St. Leonard's Place, York. Deposit £3, payable to Corporation. Tenders by June 27.

#### MATERIALS AND SUPPLIES

**Belfast.**—Supply and delivery of 12,000 dustbins, for City Council. Documents from the City Surveyor's Cleansing Section, 16 Ormeau Avenue, Belfast, 2. Tenders by July 4.

**Bolton, Lancs.**—Supply of fuel oil for heating, for B.C. Documents from the Chief Education Officer, Nelson Square, Bolton. Tenders by July 12.

**Flintshire.**—Supply and delivery to various depots approximately 1,000 tons total rock salt, grade 4, for snow clearing, for C.C. Documents from the County Surveyor, County Buildings, Mold. Tenders by July 4.

**Leyton, Essex.**—Supply and delivery to the Corporation Depot, for B.C., of galvanised dustbins and covers of 2 cu. ft. capacity, to British Standards Specification 792/1947, in lots of 100 as and when required during the period ending March 31, 1962. Documents from the Borough Engineer and Surveyor, Town Hall, Leyton, E.10. Tenders by June 30.

**Standish-with-Langtree, Lancs.**—Following, for U.D.C.: Supply and delivery of 400 galvanised mild steel dustbins with lids, 34 cu. ft. capacity, made to B.S.S. 792 and embossed on bin and lid, previous to galvanising, with the letters S.U.D.C. in 1½ in. characters. Consideration will be given to bins equal or superior to the B.S.S. 792. Tenders, in plain sealed envelopes marked "Tender for bins" and giving particulars of period required for delivery, to Donald Chisholm, clerk of the Council, Council Offices, Ashfield House, Standish, near Wigan, by noon, June 27.

#### PLANT AND MECHANICAL TRANSPORT

**Argyllshire.**—Supply of 5-ton Albion Chieftain tipping lorries, for C.C. Applications to the County Engineer, Lochgilphead, Argyll, before June 30.

**Bury St. Edmunds, Suffolk.**—Supply and delivery of one 7/5 Barford mechanically fed non-tilting drum concrete mixer type 5NF, with diesel engine, fitted with four pneumatic tyres, for B.C. Tenders, endorsed "Concrete

Mixer," to George S. Standley, borough engineer and surveyor, Borough Offices, Bury St. Edmunds, by noon, June 30.

**Dunbartonshire.**—Supply of a Massey-Ferguson 35 tractor, for C.C. The tenders should include an offer for the purchase of a Singer Monarch tractor (registration ESN.177) which is being disposed of and can be inspected by arrangement at Cumbernauld Cemetery, Baronhill, Cumbernauld. Documents from Robert Fleming, district clerk, District Council Offices, Cumbernauld. Tenders by June 27.

**Faversham, Kent.**—Supply and delivery of one 12 cu. yd. end loading refuse collecting vehicle, fitted with means of compressing refuse, for B.C. Documents from the Borough Surveyor, Municipal Offices, Faversham. Tenders by July 11.

**Hornsey.**—Following, for B.C.: Two 5-ton trucks; one 4-ton truck; one road sweeper/collector; one Land-Rover; one Derby type side loading refuse collection truck; one 5-cwt. van. Documents from Borough Engineer, Town Hall London, N.8. Tenders by July 8.

**Liverpool.**—Supply and delivery of two 4/5-ton chassis and cabs, for City Council. Documents from City Engineer and Surveyor, Municipal Buildings, Liverpool, 2. Tenders by July 15.

**London.**—Snow-clearing vehicles—supply of the following, for Ministry of Transport: Ten light 4 x 4 chassis and cab; four heavy 4 x 4 chassis and cab; and three 6 x 6 chassis and cab. Documents from the Chief Mechanical Engineer, Ministry of Transport, Room 401, 21-37 Hereford Road, London, W.2. Tenders by June 30.

**Monmouthshire.**—Supply and delivery of the following ground machinery and equipment, for C.C.: (a) Massey-Ferguson tractor and accessories; (b) Ransomes mowers—heavy and light; (c) general equipment. Documents from S. Leyshon, county architect, Queen's Hill Offices, Newport, Mon. Tenders by June 30.

**Orpington, Kent.**—Supply and delivery of two 18 cu. yd. dual tip, rear-loading refuse collection vehicles with diesel engines, for U.D.C. Vehicles to be painted, lettered and delivered in accordance with the Council's instructions, further particulars of which may be obtained from the Chief Public Health Inspector, Council Offices, Crofton Pound Hill, Orpington. Tenderers are required to offer a price for two 10 cu. yd. Karrier C.K.3 side-loading refuse collection vehicles (1950) to be taken in part exchange. The vehicles can be inspected by arrangement with the Chief Public Health Inspector at the depot at the rear of the Council Offices. Tenders, on suppliers' own form, stating date of delivery, in envelopes endorsed "Refuse Collection Vehicles," to Stephen King, clerk of the Council, Council Offices, Crofton Pound Hill, Orpington, by noon, July 6. Tenderers should note that the Council is entitled to a fleet owner's discount and tenders must be endorsed to the effect that this has been taken into consideration in submitting prices.

**Whitley Bay, Northumb.**—Supply and delivery of a diesel-engined mechanical road sweeper, for B.C. Tenders should include for one spare set of brushes, painting and lettering vehicle, delivery and tuition for operator, and be accompanied by full details of the equipment offered. Tenders, in a plain sealed envelope endorsed "Tender for mechanical sweeper," to F. S. Watson, town clerk, Municipal Offices, Whitley Bay, by noon, July 16.

#### PLAYING FIELDS, PARKS, ETC.

**Camberwell.**—Honor Oak Sports Ground and Garden of Remembrance: Levelling, grading and some paving of approx. 4.80 acres of sports ground and extension to Garden of Remembrance at Honor Oak, for B.C. Documents from Borough Engineer and Surveyor, Town Hall, Camberwell, S.E.5. Tenders by June 29.

**Cheshire.**—Construction of seven hard tennis courts and the layout and planting of school surrounds at Wilmslow County Grammar School, for Co. E.C. The work to be taken in hand immediately and completed within three months of the date of the contract. Documents from John G. Kellett, director of education, County Hall, Chester. Deposit £3 3s. Tenders by July 4.

**\*Chigwell, Essex.**—Various works at children's playground, site C, Westhall Road, for U.D.C. Deposit £2 2s. Tenders by July 4.

**Croydon, Surrey.**—Major earth works and drainage at proposed playing field, Old Norwood Golf Course, Upper Norwood, for B.C. Applications to the Chief Education Officer, 19 Katharine Street, Croydon. Tenders by June 28.

**Dartford, Kent.**—Construction of a bowling green at Hesketh Park, for B.C. Documents from Thomas Armstrong, town clerk, Council Offices, Dartford. Tenders by July 8.

**Kingston-upon-Thames, Surrey.**—Drainage to Kingston Grammar School Playing Fields,

Thames Ditton, for B.C., including laying 1,162 lin. yd. of various diameter porous concrete pipe and appurtenant works. Documents from the Borough Surveyor, Guildhall, Kingston-upon-Thames. Deposit £2 2s. Tenders by June 28.

**Newport, Mon.**—Following, for B.C.: Grading, levelling, and top soiling of some six sites in the borough to the approximate value of £9,000. Documents from Parks Superintendent, Civic Centre, Newport. Tenders by July 11.

**Swansea.**—Layout of grounds at Portmead County Primary School, for B.C. The work includes excavation, filling, levelling, with drainage and other contingent works over an area of approximately 18,000 sq. yd. Documents from Norman Hopkins, consulting engineer, 78 Mansel Street, Swansea. Deposit £5 5s. Tenders by July 11.

**Widnes, Lancs.**—Crow Wood recreation ground, portion 2, for B.C. Deposit £2 2s. Tenders by July 4.

#### ROADS, BRIDGES AND SITE WORKS

**Alfreton, Derbys.**—Heating and planing of approximately 44,000 sq. yd. of carriageway during July or early August, 1960, for U.D.C. Documents from the Surveyor, Council Offices, Alfreton. Tenders by July 2.

**Banstead, Surrey.**—Dual carriageway scheme, Brighton Road, A.217, for U.D.C. Deposit £10. Tenders by Aug. 8.

**Bath.**—Construction of footpaths, access roads, etc., contract 2, for City Council. Deposit £2 2s. Tenders by July 7.

**Batley, Yorks.**—Private street improvements, for B.C. Tenders by July 11.

**Beddington and Wallington, Surrey.**—Site works for 30 garages at Southway, Wallington, for B.C., including site excavation, foundations, surfacing and garage bases. Documents from the offices of the Borough Engineer and Surveyor, Town Hall, Wallington. Tenders by July 1.

**Bedfordshire.**—Widening and realignment of A.418, Cow Bridge section, for C.C. Deposit £2. Tenders by July 8.

**Bedfordshire.**—Widening of the existing carriageway to form two deceleration splays at Astwick Turn, route A.1, for C.C., the maximum widening being 10ft. and the total length 270 lin. yd. The new portion of the carriageway being constructed in crushed concrete and lean-mix concrete with asphalt surfacing. Documents from the County Surveyor, Dents Road, Bedford. Deposit £2. Tenders by July 8.

**Brighton, Sussex.**—Street works, for B.C. Tenders by July 2.

**Bromsgrove, Wores.**—Garage site works on the Charford estate: (a) Total 700 super. yd. tarmac entrances to various sites; (b) fencing: new work and repairs to existing boundary fences in cleft chestnut and close boarding. Documents from the Housing Manager, The Council House, Bromsgrove. Tenders by July 1.

**Buxton, Derbys.**—Heating and planing approximately 2,080 sq. yd. carriageway prior to surfacing for B.C. Documents from A. C. W. Ryland, borough engineer, Town Hall, Buxton. Tenders by July 4.

**Cambridgeshire.**—Supplying and laying by machine approximately 2,250 tons of gravel asphalt base course and 400 tons of granite asphalt wearing course on the Cambridge-Newmarket trunk road A.45, between Teverham Turn and High Ditch Road, contract 6011, for C.C. Documents from the County Surveyor, Shire Hall, Castle Hill, Cambridge. Tenders by June 30.

**Canterbury, Kent.**—Extension to the cattle market, Markey Way, for City Council. Tenders by July 4.

**Cardiff.**—Waterhall Road improvement scheme, for City Council. Deposit £2 2s. Tenders by July 8.

**Carmarthen.**—Site works, Crispin Avenue and Russell Terrace garage sites, for B.C. Works involve 230 cu. yd. excavation; 190 yd. concrete edging; 280 cu. yd. hardcore foundation; 1,250 super. yd. bitumen macadam surfacing and the laying of 6 in. surface water drain and gullies. Documents from J. Vivian Evans, borough engineer, John Street, Carmarthen. Deposit £2 2s. Tenders by July 4.

**Cheshire.**—Following works, for C.C.: (1) Cleaning and painting of Brookfield Road Canal Bridge, Lymm; (2) cleaning and painting of Backford Canal Bridge, Little Stanney Canal Bridge and Hooton Bridge, in the Ellesmere Port area. Documents from C. G. Day, county surveyor, Backford Hall, Chester. Tenders by July 5.

**Chorleywood, Herts.**—Site clearance and sewers, for U.D.C. Deposit £2 2s. Tenders by July 30.

**Chorleywood, Herts.**—Site preparation work on 25 acres of land east of Berry Lane, for U.D.C., comprising clearance of trees and hedgerow; approximately 5,600 cu. yd. excavation; approximately 1,300 lin. yd. 6 in. in diameter soil sewers; approximately 1,100 cu.

yd. hardcore foundations; approximately 1,700 lin. yd. channels and kerbing together with drainage and soakaways to same; approximately 5,600 sq. yd. temporary surfacing. Documents from the office of L. C. Powell, architect, Norfolk House, Station Road, Chesham, Bucks., by June 30. Deposit £2 2s. (cheques payable to the U.D.C.). Plans also seen at the Council Offices, Chorleywood House, Chorleywood. Tenders by July 30.

**Colwyn Bay, Denbighs.**—Construction of roads and sewers at Mochrde industrial development site, for B.C. Tenders by July 4.

**Coseley, Staffs.**—Mason Street-Chad Road improvement, for U.D.C. Deposit £2. Tenders by July 11.

**Cowdenbeath, Fifes.**—Road improvement works during the current year, for B.C. Documents from H. Gardiner, burgh surveyor, Town House, Cowdenbeath. Tenders by July 4.

**Darlaston, Staffs.**—Construction of roads and sewers for sections 13 and 14 of the Bentley housing estate, for U.D.C. The contract includes for the construction of approximately 3,840 sq. yd. of carriageway in bituminous macadam, with approximately 350 lin. yd. of 9 in. and 12 in. glazed stoneware sewers, together with appurtenant works. Documents from C. W. Frost, engineer and surveyor, Victoria Park, Darlaston. Plans also seen at the office of the Resident Clerk of Works, Monmouth Road, Bentley Estate. Deposit £2 2s. Tenders by July 11.

**Dewsbury, Yorks.**—(a) Repairs to roads and paths; (b) repairs and repointing of brickwork, etc., at premises within the Hospital Group, for Dewsbury, Batley and Mirfield Hospital Management Committee. Documents from Geo. W. Batchelor, group secretary, 20 Oxford Road, Dewsbury. Tenders by July 1.

**Dorking, Surrey.**—Roads and sewers, Goodwyns estate, for U.D.C. Tenders by July 12.

**Down.**—Surfacing in two-course asphalt the Banbridge-Newry road (route T4) in the townlands of Carnmen and Lisduff, for C.C. Documents from the County Surveyor, County Surveyor's Office, English Street, Downpatrick. Tenders by July 5.

**Droylsden, Lancs.**—Following, for U.D.C.: Supply and laying of approximately 280 lin. yd. of new concrete kerbs and 1,160 sq. yd. of new concrete flags, together with the re-laying of approximately 600 lin. yd. of existing stone kerbs and 770 sq. yd. of existing concrete flags, on various classified roads within the district. Documents from H. H. Emery, engineer and surveyor, Council Offices, Droylsden. Tenders by July 2.

**Durham.**—Supply and laying of approximately 318,000 super. yd. of hot rolled asphalt, for C.C. The contract includes the bedding and laying of reflecting road-marking studs, and other incidental works. Documents from the County Engineer and Surveyor, Aykley Heads, Durham. Tenders by July 1.

**East Sussex.**—Private street works, for C.C. Deposit £5 5s. Tenders by July 8.

**Farnborough, Hants.**—Making-up the following, for U.D.C.: (1) Boundary Road, comprising approximately 2,850 sq. yd. of carriageway, 2,060 sq. yd. of footway, 840 lin. yd. of kerbing, soakaways, gullies and other incidental works inside and outside the limits of the private street; (2) Park Place, consisting of approximately 710 sq. yd. of carriageway, 330 sq. yd. of footway, 180 lin. yd. of precast kerbing, 80 lin. yd. of in-situ kerbing, 60 lin. yd. of 6 in. surface water drains, gullies and other incidental works inside and outside the limits of the private street. Documents from the Engineer and Surveyor, Municipal Offices, Farnborough. Tenders by July 1.

**Farnham, Surrey.**—Making-up of Bridgefield (part of), for U.D.C., comprising approximately 2,000 super. yd. of gravel asphalt carriageway surfacing and 1,400 super. yd. of bitumen macadam, footpath surfacing, together with surface water drainage, laying of new kerbs, and realignment of existing kerb. Documents from Geoffrey Poole, engineer and surveyor, Council Offices, South Street, Farnham. Deposit £2 2s. Tenders by June 29.

**Frirn Barnet, Middx.**—Road works, for U.D.C. Tenders by July 8.

**Hambledon, Surrey.**—Site development works at Middleton Close, Chapel Lane, Milford, contract 2, for R.D.C., comprising approximately 800 super. yd. of 2 in. thick gravel asphalt surfacing to carriageway, garage area and waiting bay; construction of 350 super. yd. footpaths with 2 in. tarpaving on 4 in. clinker base within 2 in. by 6 in. precast concrete edging; preparation and sowing of verges, and other ancillary works. Documents from the office of the Engineer and Surveyor, Council Offices, Buryfields, Guildford. Deposit £2 2s. (cheques payable to R.D.C.). Tenders by July 11.

**Hazel Grove and Bramhall, Ches.**—Making-up and completion of St. Michaels Avenue

part of), Bramhall, for U.D.C. Documents from the office of J. Fleming Andrew, engineer and surveyor, Council House, Hazel Grove. Deposit £2 2s. Tenders by July 5.

**High Wycombe, Bucks.**—Construction of approximately 530 lin. yd. of concrete road, together with approximately 90 lin. yd. of 21 in. diameter surface water sewer, at Manor Road, stage II, for B.C. Documents from the Borough Engineer's Department, Municipal Offices, High Wycombe. Deposit £2 2s. (cheque). Tenders by July 4.

**Hove, Sussex.**—Construction of a road, for B.C. Tenders by July 2.

**Hull.**—Construction of approximately 6,000 sq. yd. of concrete road and 725 lin. yd. of sewer in the permanent housing site ref. 113A, residential area 1A (land south of Boothferry Road, for City Council. Documents from the City Engineer, Guildhall, Hull. Deposit £2, payable to City Treasurer. Tenders by July 11.

**Hythe, Kent.**—Resurfacing of trunk, county and district roads, for B.C. Deposit £5 5s. Tenders by July 11.

**Lancashire.**—Construction of roadworks in Dale Avenue, Longton, Preston, for C.C. Documents from the County Surveyor and Bridgmaster, P.O. Box 9, Preston. Deposit £2. Tenders by July 1.

**Leigh, Lancs.**—Complete making-up of Breaston Avenue and Manor Grove and the construction of 12 in. and 9 in. sewers in Breaston Avenue, Manor Grove and Warrington Road, for B.C. The works comprise approximately 220 yd. of street works and 260 yd. of sewers. Documents from the Borough Engineer and Surveyor, Town Hall, Leigh. Deposit £2 2s. Tenders by July 14.

**Lichfield, Staffs.**—Following, for R.D.C.: (Contract 209) Footpaths, etc.—Lincoln Croft, Shenstone, Longwood estate, Fazley, Oakdene estate, Burntwood, including construction of approx. 6,500 sq. yd. of tarmacadam footpaths. Documents from G. K. Pullen, clerk to the Council, Rural Council House, Lichfield. Tenders by July 6.

**Lurgan, Armagh.**—Bitumen resurfacing and surface dressing, for B.C. Documents from the Borough Surveyor, 6 Union Street, Lurgan. Tenders by July 4.

**Malvern, Wores.**—Widening of Pickersleigh Road, for U.D.C. Deposit £2 2s. Tenders by July 15.

**Manchester.**—Constructing 480 sq. yd. bitumen macadam carriageway and all ancillary works at cul-de-sac off Millbeck Road, Langley, for City Council. Documents from the City Surveyor (Room 208), Town Hall, Manchester, 2. Tenders by July 4.

**Middleton, Lancs.**—Footpath reconstruction works, for B.C. Tenders by July 13.

**Midlothian.**—Improvement scheme at Inveresk Village, for C.C., comprising approx. 2,000 sq. yd. of roadworks and 120 lin. yd. mass concrete and masonry retaining and boundary walls and ancillary works. Documents from the County Surveyor, 32 Palmerston Place, Edinburgh. Deposit £2 2s. Tenders by June 29.

**Mitcham, Surrey.**—Following, for B.C.: (1) Resurfacing of approximately 7,500 sq. yd. of carriageway in two roads; (2) substitution of slab paving for tarpaving, kerbing renewal, slab paving re-laying and incidental works to footways. Documents from the Borough Engineer and Surveyor, Town Hall, Mitcham. Tenders by June 29.

**Newcastle-under-Lyme, Staffs.**—Roads and footpaths at Wilton Street clearance area, for B.C., comprising approximately 3,000 sq. yd. of carriageway, 1,000 sq. yd. of footpath, kerbing, surface water drainage and other ancillary works. Documents from the office of the Borough Engineer and Surveyor, Lancaster Buildings, High Street, Newcastle, Staffs. Tenders by July 4.

**Newcastle-under-Lyme, Staffs.**—Making-up of Oaklands Avenue (part). Porthill (Boulton Street to 6d. north-west), for B.C., comprising approximately 400 sq. yd. of carriageway excavation and foundation, 790 sq. yd. of two-coat macadam (part by machine), the re-laying of 113 lin. yd. of kerb, and other ancillary works. Documents from the office of the Borough Engineer and Surveyor, Lancaster Building, High Street, Newcastle, Staffs. Tenders by July 1.

**New Mills, Ches.**—Extension of Bakehurst estate, for U.D.C. Tenders by July 11.

**Norham and Islandshire, Northumb.**—Renewal of existing tarmacadam paths in concrete on housing estates at Shoredale, Horncliffe and Greenway, East Ord, for R.D.C. Documents from the Public Health Inspector and Surveyor, Council Offices, 52 Ravensdowne, Berwick-upon-Tweed. Tenders by July 9.

**Northwich, Ches.**—Roadworks and drainage works, Malpas Road, for U.D.C. Tenders by July 9.

**Peterborough.**—Annual carriageway surfacing contract 1960-61, for City Council Deposit £2. Tenders by June 29.

**Pontypool, Mon.**—Trevethin neighbourhood unit, phase II, scheme B, advance preparation of roads and sewers, for U.D.C., comprising the construction of some 5,000 lin. yd. of concrete kerb base, 16,000 sq. yd. of carriageway to base course macadam, and 4,000 lin. yd. of single sewer varying from 6in.-18in. in diameter, including site clear and earthworks necessary for the construction of roads and house platforms. Documents from the Engineer and Surveyor, Municipal Offices, Hanbury Road, Pontypool Deposit £3 3s. Tenders by July 5.

**Rochester, Kent.**—Widening of Manor Lane, Borstal (section 2), for City Council. Deposit £2 2s. Tenders by July 15.

**Salisbury, Ches.**—Advanced preparation of housing sites, Gratrix Lane, 3/1960 development, for B.C. Deposit £2 2s. Tenders by July 11.

**Staines, Middx.**—Improvement to junction of London Road and Desford Way, Ashford, for U.D.C. Deposit £2 2s. Tenders by July 7.

**Standish-with-Langtree, Lancs.**—Surface dressing of approximately 16,500 sq. yd. of road using cold bituminous emulsion and granite chippings, for U.D.C. Documents from H. Knowles, surveyor and water engineer, Ashfield House, Standish. Tenders by July 25.

**Sunderland, Dur.**—Construction of footpaths, Thorney Close estate, comprising 20,200 sq. yd. of 2½in. precast concrete flags, for B.C. Documents from the Borough Engineer, 27 Fawcett Street, Sunderland. Deposit £2 2s. (cheques payable to the Corporation). Tenders by June 28.

**Sunderland, Dur.**—Construction of footpaths, Town End Farm estate (phase I), for B.C., comprising the laying of 24,700 sq. yd. of 2½in. precast concrete flags. Documents from Borough Engineer, 27 Fawcett Street, Sunderland. Deposit £2 2s. Tenders by June 28.

**Sunderland, Dur.**—Site preparation works, Deptford area, for B.C., comprising site levelling (excavation of approx. 130,000 cu. yd. of material), laying of 700 lin. yd. of sewers in trench, construction of 3,500 sq. yd. of concrete carriageways and ancillary works, including the construction of a steel sheet piled retaining wall. Documents from the Borough Engineer's Office, 27 Fawcett Street, Sunderland. Deposit £2 2s. Tenders by July 6.

**Swadlincote, Derbys.**—Supply and laying of approximately 14,000 sq. yd. of lin. dense bituminous macadam surfacing on various roads, for U.D.C. Documents from the office of the Engineer and Surveyor, Bank House, Midland Road, Swadlincote. Tenders by July 4.

**Turton, Lancs.**—Resurfacing and widening of carriageway and footways on Chapelton Road (B.6391) for Horrobin, for U.D.C., together with the construction of a mass concrete retaining wall and a reinforced concrete box culvert. Documents from the office of the Engineer and Surveyor, Council Offices, Bromley Cross, near Bolton. Deposit £5 5s. Tenders by July 19.

**Walsall, Staffs.**—Roads and sewers, Darlaston Road housing site, for B.C. Deposit £2 2s. Tenders by July 4.

**Walsall, Staffs.**—Stoney Lane improvement and reconstruction of Teece's Bridge, for B.C. Deposit £5 5s. Tenders by July 5.

**Walsall, Staffs.**—Wallows Lane bridge, for B.C. Deposit £2 2s. Tenders by July 5.

**West Riding.**—Repairing the following bridges, for C.C.: (1) Timber fenders at Dutch River Bridge carrying the County Road, A.161, over the Dutch River at Goole and at Boothferry Bridge carrying the Trunk Road, A.614, over the River Ouse, near Goole; (2) timber fenders at Thorne Canal swing bridge on trunk road, A.614, at Thorne near Doncaster; (3) timber deck at Beal Bridge carrying the County Road, C.306, over the River Aire at Beal, near Knottingley. Documents from the County Engineer and Surveyor, County Hall, Wakefield. Deposit £1 each, cheques payable to West Riding Treasurer. Tenders by July 7.

**West Sussex.**—Reconstruction of roads and the laying of surface water drainage for the making-up of Cecil Road, Lancing, for C.C. Documents from the County Surveyor, County Hall, Chichester. Deposit £1. Plans seen at the offices of the County Surveyor, Westminster Bank Chambers, Chichester. Tenders by July 5.

#### SEWERAGE, SEWAGE AND REFUSE DISPOSAL

**Argyllshire.**—Construction of an improvement to Sandbank drainage, for C.C., comprising the laying of approximately 300yd. of 9in. fireclay sewer and the construction of five manholes in Cromlech Road and Hotel Brae. Applications to the County Engineer, Lochgilphead, by July 1.

**Aylesbury, Bucks.**—Construction of extensions to the Wendover sewage disposal works, for R.D.C., comprising balancing tank,

settlement tank, storm tanks, three bacterial filters, humus tanks, sludge drying beds, sludge pumping station, garage, etc., and general site works. Documents from the offices of Elliott and Brown, consulting engineers, Stanley House, Pelham Road, Nottingham. Deposit £5 5s. (cheques payable to the R.D.C.). Tenders by July 11.

**Barrow-upon-Soar, Leics.**—Flood relief sewer, Sibley, to be carried out between July 29 and Aug. 15, for R.D.C. Documents from the Engineer and Surveyor, 31 Fowke Street, Rothley, Leics. Tenders by July 8.

**Beverley, Yorks.**—Elloughton and Brantingham sewerage scheme, for R.D.C. Deposit £3 3s each. Tenders by July 14.

**Canterbury, Kent.**—Laying of approximately 281 lin. yd. of 12in. diameter glazed stoneware surface water sewer in New Dover Road, for City Council. Documents from the City Engineer, Municipal Buildings, Dane John, Canterbury. Tenders by July 1.

**Crediton, Devon.**—Cheriton Bishop and Cheriton Cross sewerage and sewage disposal, for R.D.C. Deposit £5 5s. Tenders by July 23.

**Dungannon, Tyrone.**—Castlecaulfield sewerage, contract 1, for R.D.C., including the construction of approx. 470 lin. yd. of 6in. dia. earthenware sewers, an ejector house and the laying of 120 lin. yd. of spun-iron pipes, together with ancillary works. Documents from the Rural District Council Offices, Dungannon. Deposit £3 3s. Tenders by July 7.

**Dungannon, Tyrone.**—Supply and erection at Annaghmore of the following sewage plant, for R.D.C.: (a) Hand stops and disc valves; (b) dosing siphon and distributors; (c) two 40-gallon-per-minute ejectors. Documents from Muncie and Kennedy, consulting engineers, 133 University Street, Belfast, 7. Tenders by July 13.

**Fifehire.**—Cupar Muir drainage scheme, for C.C. including approximately 1,554yd. of 6in., 9in., 18in. and 24in. sewers with manholes and a concrete settlement tank. Applications to the County Clerk, County Buildings, Cupar, by June 29.

**Gower, Glam.**—Execution of works of sewerage at Three Crosses and Duntant, for R.D.C., consisting of the following: (a) Three Crosses—the laying of approx. 2,500 lin. yd. of 6in. asbestos-cement sewers, 3,900 lin. yd. of 6in. concrete sewers, the building of manholes and the construction of a sewage diverter station; (b) Duntant, stage 2 (part 2)—the laying of approx. 1,500 lin. yd. of 6in. concrete sewers, the building of manholes and other appurtenant works. Documents from Henry Davies, engineer, 19-21 Uplands Crescent, Swansea. Deposit £6 6s. Tenders by July 4.

**Hastings, Sussex.**—Reconstruction of approximately 800 lin. yd. of existing brick sewer in Upper Park Road, with concrete pipes varying in diameter from 12in. to 18in., together with brick and precast concrete manholes, for B.C. Documents from the offices of the Borough Engineer, 37 Wellington Square, Hastings. Deposit £2 2s. Tenders by July 18.

**Llangefni, Anglesey.**—Sewers, contract ref. 31G2, for U.D.C. Deposit £5 5s. Tenders by July 4.

**Midlothian.**—Construction of about 580 lin. yd. of 9in. and 12in. diameter sewers and ancillary works, but excluding supply of pipes, at Newtowngrange, for C.C. Documents from the County Engineer, 32 Palmerston Place, Edinburgh. Tenders by July 5.

**Neath, Glam.**—Proposed storm overflow culvert at Morfa Glas, Glynneath, for R.D.C., consisting of the laying of 6ft. dia. concrete tubes with surround, the construction of brick wing walls, and other incidental work. Documents from the office of J. T. Jones, engineer and surveyor, 18 Orchard Street, Neath. Deposit £3 3s. Tenders by July 12.

**North Walsham, Norfolk.**—Extension of sewer and water main, Bradfield Road, for U.D.C., including the laying of approximately 45yd. of 3in. cast-iron water main and 360yd. of 6in. glazed stoneware sewer, together with ancillary works. Documents from the Surveyor, Council Offices, New Road, North Walsham. Deposit £1. Tenders by July 4.

**Portmadoc, Caerns.**—Following, for U.D.C.: 1,000yd. of concrete sewers and surface water drains up to 12in. diameter, and also about 70yd. of 12in. diameter spun-iron pipe on and including piling below low water level, with all incidental works. The works are to be carried out at Portmadoc and Borthygast. Applications, in writing, to Richards and Dumbleton, consulting engineers, Cornwall Buildings, 45 Newhall Street, Birmingham, 3, and Greenways, Portmadoc. Deposit £3, payable to the U.D.C. Plans also seen at the office of Edith M. Roberts, clerk of the Council, Council Offices, Town Hall, Portmadoc. Tenders by July 18.

**Preston, Lancs.**—Joint sewerage and sewage disposal scheme, for R.D.C. Deposit £5 5s. Tenders by July 14.

**Sodbury, Glos.**—Construction of approximately 2,370 lin. yd. of 9in. and 2,080 lin. yd. of 6in. diameter sewers, together with manholes and house connections as may be required, for R.D.C. Applications to Maynard Froud and Stevens, consulting engineers, Alliance House, Baldwin Street, Bristol, 1, by noon, July 2. Deposit £3 3s. Tenders by Aug. 22.

**Uxbridge, Middx.**—Surface water drainage, contract 450, for B.C. Tenders by July 7.

**Willenhall, Staffs.**—Following, for U.D.C.: Excavating and clearing out two sludge beds and carting away and spreading on site at a distance not exceeding 500yd. The sludge beds are as follows—(a) area approx. 8,900 sq. yd., average depth 2ft.; (b) area approx. 5,000 sq. yd., average depth 2ft. There are no special tender documents, but tenderers are advised to inspect the site. Tenders endorsed "Tenders for sludge bed(s)," to J. R. Riding, clerk of the Council, Town Hall, Willenhall, by June 29.

#### STREET LIGHTING

**Bridport, Dorset.**—Group B street lighting for B.C. Deposit £2 2s. Tenders by July 30.

**Consett, Dur.**—Improved street lighting, for U.D.C.: (i) Consett to Castleside Road, A.692; (ii) Victoria Street, Bertha Street, and Park Road, B.6322. Supply and erection of: (a) 10 mercury vapour, and (b) 56 sodium vapour lanterns, together with all necessary fittings, poles, etc. This work to include for fixing and wiring. Documents from Surveyor, Council Offices, Medomsley Road, Consett.

**Coseley, Staffs.**—Erection of street lighting, for U.D.C. Deposit £2. Tenders by July 11.

**Kesteven.**—Street lighting, trunk road A.1, for C.C. Tenders by July 15.

**Lichfield, Staffs.**—Group A street lighting, Walsall Road, A.461, for City Council, including supply and installation of 27 steel columns, together with sodium lanterns and all ancillary equipment. Documents from the City Engineer and Surveyor, Meredith House, 62 Wade Street, Lichfield. Deposit £2 2s. Tenders by July 8.

**Llanelli, Carmarthens.**—Following, for B.C. Connecting of a supply of electricity from the South Wales Electricity Board's mains to approximately 245 street lighting units in the borough, and excavating for and laying of approximately 750 lin. yd. of cable in connection therewith. Documents from the Borough Engineer and Surveyor, Town Hall, Llanelli. Deposit £2 2s. Tenders by June 30.

**Reigate, Surrey.**—Supply and erection of 35 group A steel lighting columns and ancillary equipment, on the Croydon Road, A.242. Documents from the Borough Surveyor, Town Hall, Reigate. Tenders by June 29.

**Saltsay, Corn.**—Complete installation of group A fluorescent lighting in Fore Street, and group B mercury vapour lighting in Callington Road, for B.C. A total of 46 lighting units is involved, together with trenching for services cables and other ancillary work. Documents from A. de Barr, borough surveyor, Church House, Saltsay. Deposit £2 2s. (cheque). Tenders by July 26.

**Scalby, Yorks.**—Following, for U.D.C.: at Coldyhill Lane, Newlands Park Drive, Cleveland Avenue and Weydale Avenue, Newby: Supply and erection of 34 colour-corrected mercury vapour 125-W lamps and 11 colour-corrected mercury vapour 8-W lamps in accordance with Group B lighting. Contract (b) supply and deliver lanterns, time switches, bulbs and ancillary materials; (c) supply deliver and erect, including painting, steel columns complete with brackets—mounting heights 18ft. and 15ft.; (d) installation and wiring of all equipment embraced in (b). Documents from G. Horn, surveyor, Council Offices, Scalby. Deposit £2 2s. Tenders by July 18.

#### AWARDS

##### BUILDING AND DECORATING (See also Housing Schemes)

**Ashington, Northumb.**—Reinforced concrete frame for new four-storey ward block at Ashington General Hospital, for Newcastle Regional Hospital Board. P. H. Knighton, chief architect: Demolition and Construction Co., Ltd., Queen Street, Newcastle upon Tyne, £51,003. General contractors for the scheme—R. Carse and Son, Prospect Road, Amble, £219,304.

**Barnes, Surrey.**—Following works, for B.C.: Supply and erection of prefabricated concrete garages at Mortlake High Street Depot—Bell and Webster, Ltd., Essex Road, Hoddesdon, Herts., £820 (recommended).

Rebuilding of flank wall and construction of bathroom at 2 Alexandra Road—Direct Labour (recommended). Estimated cost £1,100.

**Cardiff.**—Adaptations to toilets, etc., at Oldwell Home, for City Council: Direct Labour (recommended). Estimated cost £970.

**Chancetbury, Sussex.**—Erection of a new Council chamber at Storrington, for R.D.C.: Y. J. Lovell and Son, Ltd., The Druids, The Bishopric, Horsham, £21,378.

**Coleraine, Londonderry.**—Painting of houses, for R.D.C.: W. G. Killough, Kilrea £3,347.

**Crawley, Sussex.**—Erection of an office block at the junction of Manor Road and the A.23 London-Brighton Road, Crawley New Town, for The Building and Civil Engineering Holidays Scheme Management, Ltd.: Humphreys, Ltd., 199 Knightsbridge, London, S.W.7, £727,234; Eric Firmin and Partners, architects, Thavies Inn House, 5 Holborn Circus, London, E.C.1. Bylander, Waddell and Partners, consulting engineers, 169 Wembley Park Drive, Wembley; George Corderoy and Co., quantity surveyors, 2 Caxton Street, Westminster, S.W.1.

**Crook, Dur.**—Erection of basic refractories manufacturing plant for the West Hunwick Silica and Firebrick Co., Ltd.: British Ceramic Services, Ltd., Park Avenue, Wolstanton, Newcastle, Staffs.; J. Dawson Fawcett (Darlington), Ltd., Haughton Engineering Works, Darlington; G. Stephenson (Builders and Contractors), Ltd., Chester Street, Bishop Auckland. Estimated cost £250,000.

**Croydon, Surrey.**—Erection of changing rooms (stage 11) at the John Ruskin Grammar School for Boys, for B.C.: G. F. Dean and Sons, 65 Clock House Road, Beckenham, Kent, £3,959 (accepted); Henry Streeter, Ltd., £4,041; T. R. Roberts, Ltd., £4,730.

**Dagenham, Essex.**—Extension to factory and offices at Roebuck Road, Hainault industrial estate, for Advance Components, Ltd.: K. Wager and Co., Ltd., Joinery Works, Hoddesdon, Herts., estimated cost £24,000. Ronald Ward and Partners, architects, 29 Chesham Place, London, S.W.7. W. W. Green and Partners, quantity surveyors, 396 Seven Sisters Road, London, N.4. Site work about to commence.

**Dukinfield, Ches.**—Painting contracts, as follows, for B.C.: (1) 73 dwellings—G. H. Robinson, Mossley, Manchester; (2) 104 dwellings—Co-operative Society, Ltd., Stalybridge; (3) 90 dwellings—E. Mellor, 95 Victoria Street, Newton, Hyde (recommended).

**Dundee.**—Extension to premises, for the National Cash Register Co. (Manufacturing), Ltd., Kingsway West, Dundee; Holland & Hannen and Cubitts (Scotland), Ltd., 5 Royal Terrace, Edinburgh, 7, estimated cost £500,000. Wylie, Shanks and Underwood, architects, 12 Clairmont Gardens, Glasgow, C.3; James Barr and Sons, quantity surveyors, 213 St. Vincent Street, Glasgow, C.2; and Donald Smith, Seymour and Rooley, consulting engineers, 204 West Regent Street, Glasgow, C.2.

**Felling, Dur.**—Erection of 30 garages at Heworth Wagonway, for U.D.C.: Direct Labour, £6,925.

**Gateshead, Dur.**—Erection of shops and offices, High Street, for L. Rodney Marshall and Tweedy, architects, 36 Blackett Street, Newcastle upon Tyne; Thomas Clements and Son, Selborne Gardens, Jesmond, Newcastle upon Tyne.

**Harrogate, Yorks.**—Erection of a block of offices on site of Berkeley Hotel at 35 Victoria Avenue, for Mercantile Credit Co., Ltd.; Walter G. Birch (Harrogate), Ltd., Montpelier House, Cold Bath Road, Harrogate, Clifford Tee and Gale, architects, 147 Victoria Street, London, S.W.1; Reynolds and Young, quantity surveyors, 329 H.G. Holborn, London, W.C.1.

**Hastings, Sussex.**—Erection of (a) stage I of new buildings for Hastings and St. Leonards Technical College, and (b) St. Paul's C.E. School: Joseph Cartwright, Ltd., 9 Streatam High Road, London, S.W.16, (a) £165,911 and (b) £51,278 (recommended, subject to M.E. approval).

**Heanor, Derbys.**—Modernisation of dyeing and finishing works, for I. and R. Morley, Ltd. John L. Bakewell, architect, 25 Chapel Street, Belper: Bowmer and Kirkland, Church Street, Heage, Derbys. (recommended, negotiated contract).

**Hendon, Middx.**—Following works, for C.C.: Enlargement of kitchen and restaurant of catering department at Technical College—W. Richards and Sons (Hendon), Ltd., 13 Sutton Parade, London, N.W.4, £1,972 (recommended).

Interior decoration of Algernon Road School—Direct Labour (recommended). Estimated cost £2,800.

**Hornsey, Middx.**—Extension to canteen at College of Art, for C.C.: W. Manning and Sons, Ltd., 66 Park Road, London, N.8, £1,990 (recommended).

**Londonderry.**—Erection of an assembly hall at the Irish Society's Schools, Coleraine, for Co. E.C.: D. W. Morrison, Convention Avenue, Portstewart, £11,980.

**Maidstone, Kent.**—Construction of a boiler house at museum and art gallery, for B.C.: Direct Labour, £3,000 (recommended).

**Middlesbrough, Yorks.**—Extension to tyre depot on the South Bank Road light industrial depot, for Gorrills, Ltd., Wimpey and Co., Ltd., Orchard House, Fenwick Terrace, Newcastle upon Tyne.

**Morecambe, Lancs.**—Erection of the Shrimp Inn at White Lund, corner of Westgate and Lancaster Road, for Daniel Thwaites and Co., Ltd. Forshaw, Greaves and Partners, architects, 186 Oxford Road, Manchester, 13: Heysham Building Co., Ltd., Middleton Road, Morecambe.

**Newcastle-under-Lyme, Staffs.**—Erection of Cross Heath Church of England Replacement School, for B.C. The principal accommodation comprises assembly hall, kitchen, staff accommodation and three classrooms, having a total floor area of approximately 7,000 sq. ft. Construction is of cross walls with timber roof and with timber windows having metal opening lights: J. and F. T. McEllin, Ltd., New Road, Bignal End, Stoke-on-Trent, £26,713.

**Newcastle upon Tyne.**—Following works, for City Council: Adaptation of reading room, Princess Street, as an occupational centre—T. W. Hadden and Son, Ltd., 180 New Bridge Street, Newcastle upon Tyne, 1, £2,095 (recommended).

Erection of branch library on a site fronting West Road, Denton Burn—Cussins (Contractors), Ltd., The Drive, Gosforth, Newcastle upon Tyne, £18,772 (recommended, subject to Ministry approval).

Painting and decorating at various schools: T. W. Nixon, Ltd., Northumberland Road, Newcastle, 1, £6,441, and Roy Eblett, 17 Westacre Crescent, Newcastle upon Tyne, 5, £5,417.

**Newport, Mon.**—External painting of 198 flats and 29 houses at New Pastures and St. Julian's estates, for B.C.: Hawkins and Holmes, Ltd., Hunter Street, Barry, £3,309 (recommended).

**Oxford.**—Following works, for City Council: Erection of 20 garages on land at rear of Ulfgar Road—Cowley Utilities, Ltd., £1,376; rendering and roof tiling of five pairs of Orbit houses at Barton estate—John Laing and Son, Ltd., Mill Hill, London, N.W.7, and Stephenson and Co. (Oxford), Ltd., Botley Road, Oxford, £1,005 and £424, respectively; extension at City Police Station to provide eight additional bedrooms—Knowles and Son (Oxford), Ltd., 27 Pembroke Street, Oxford, £4,826; erection of a four-storey wall-type building at St. Ebbe's Corner—John Laing and Son, Ltd., £130,178 (recommended).

**Peterborough.**—Erection of boiler house and mortuary block at the Memorial Hospital, stage 2 and 3, phase 1, for the East Anglian Regional Hospital Board—Mitchell Construction Co., Ltd., Fensgate, Peterborough, £272,688 (recommended, subject to Ministry approval).

**Peterborough.**—Following works, for the Joint Education Board: Tenders received for the erection of Cromwell Road County School—W. Hawkins and Son, Ltd., £21,756; Jellings Builders, Ltd., £22,541; Granville Building Co., Ltd., £22,556; Jellings-Brudenell, Ltd., £22,661; Clifford Jellings, Ltd., £24,221.

Erection of an additional classroom and stores at Castor C.E. School—W. Hawkins and Son, Ltd., Old Fletton, Peterborough, £1,650.

**Redcar, Yorks.**—Erection of public conveniences at the municipal car park, for B.C. K. W. Ash, borough engineer: F. W. Hodgson and Sons, 44 West Dyke Road, Redcar.

**Rochdale, Lancs.**—Following works, for B.C.: Erection of school clinic at Kingsway and school and MCW clinic at Spotland—Ashton, Smethurst (Builders), Ltd., Suffolk Street, Middleton, Lancs., £8,220 and £11,295, respectively.

Erection of 161 standard-type garages on various sites: J. Hobson and Sons, Ltd., Summer Street, Rochdale (recommended). Estimated cost £27,080.

**Rosneath, Dunbartons.**—Construction of new petrol, oil and lubricating depot, for the Admiralty: John Howard and Co., Ltd., 13 Buckingham Gate, London, S.W.1, £145,000.

**Rugby, War.**—Following works, for Co. E.C.: Erection of Bilton County Infants' School—Bosworth and Wakeford, Ltd., Lawford Road, Rugby, £37,119; extensions to Balsall Heart of England High School—J. Parnell and Son, Ltd., Oliver Street, Rugby, £40,086 (recommended).

**Ruislip-Northwood, Middx.**—Extension of gymnasium-changing block at St. Mary's Secondary School, for C.C.: F. and C. Costin, Ltd., 228 Kenton Road, Harrow (recommended). Estimated cost £5,110.

**St. Albans, Herts.**—Extensions to form offices, workshop and warehouse at plot 12, Porters Wood, for Amalgamated Removers and Transport, Ltd., 85 Victoria Street, St. Albans: T. A. Bickerton and Sons, Oak Yard, Waverley Road, St. Albans, estimated cost £22,000. Philip Nicolle and Dick, architects, 53 London Road, St. Albans; S. Lazarus and Partners, quantity surveyors, 67 Cavendish Street, Portland Place, London, W.1. Work has commenced.

**Scarborough, Yorks.**—Erection of a new depot, for T. Wall and Son, Ltd. Broadbent, Thompson and Wilson, architects, Hillary Chambers, Hillary Place, Leeds: Leslie and Co., Ltd., Bath Street, Hemel Hempstead, Herts.

**Sedgefield, Dur.**—Alterations and adaptations to male ward 1 at Winterton Hospital, for Newcastle Regional Hospital Board: Henderson Bros. (1936), Smith Street, Tyne Dock, South Shields, £25,043. Fennell and Baddiley, architects, Bridge End Chambers, Chester-le-Street, in conjunction with P. H. Knighton, architect to the Board: Thomas Barrett, Sons and Partners, 84 Grange Road, Middlesbrough, are the quantity surveyors.

**Sevenoaks, Kent.**—Construction of unit factories at Edenbridge estate, for L.C.C.: Frank Bilton (London), Ltd., Beckenham, Kent, £72,185 (accepted); Croudace, Ltd., £72,293; Rice and Son, Ltd., £72,652; Truett and Steel, Ltd., £74,636; Y. J. Lovell (Sussex), Ltd., £74,825; S. C. and A. Agombar, £75,672; G. E. Wallis and Sons, Ltd., £75,876; Carlton Contractors, Ltd., £76,590; Rush and Tompkins, Ltd., £79,467; Percy Bilton, Ltd., £82,450.

**Sheffield, Lancs.**—Painting of 103 Council houses, for U.D.C.: J. E. Fletcher (Decorators), Ltd., Boston.

**Southport, Lancs.**—Piling work for new changing room block at King George V School, for B.C.: West's Piling and Construction Co., Ltd., Bath Road, Harmondsworth, West Drayton, Middx., £815.

**Stratford-upon-Avon, War.**—Improvement works to houses on the Clopton estate, contract 3, for B.C.: Coleman and Tyas, Ltd., Victoria Road, Bidford-on-Avon, £61,500 (recommended).

**Sunderland, Dur.**—Following works, for B.C. H. C. Bishop, borough architect: Erection of child welfare clinic and school medical accommodation on the Hylton Castle estate—Cussins, Ltd., The Drive, Gosforth, £19,764; additions to Railway Row cleansing depot—D. Glen, Ltd., Albert Road, Jarrow, Co. Durham, £19,144.

Factory extensions, for Ditchburns, Ltd., Villiers Street, Newrick and Blackburn, architects, 58 John Street: Randle and Co., Back Dunelm, Sunderland, £14,000.

Construction of oil storage tank of 5,000 tons capacity on Corporation Quay, for Petrofina (Great Britain), Ltd., 25 Victoria Street, London, S.W.1. W. H. S. Tripp and Partners, consulting engineers, 210 Westgate Road, Newcastle upon Tyne—Whessoe, Ltd., Darlington.

**Sunderland, Dur.**—Following works, for B.C.: Second stage (in two parts), first comprising the completion of the structural frame, floors and roof of Central Library, Museum and Art Gallery buildings—D. and J. Ranken, Ltd., Stockton Road, Sunderland, £15,474; installation of petrol pumps and tanks at Eden Vale Depot—Direct Labour. Estimated cost £3,918 (both recommended).

**Swaffham.**—Renovation work and repairs to Swaffham Assembly Rooms, for U.D.C. John Miles, engineer and surveyor: O. Staifes and Son, Station Street, Swaffham, £3,487. Work commencing July 25.

**Tynemouth, Northumb.**—Erection of public-house at Hartington Road, Marden, for J. Nimmo and Sons, Castle Eden, Co. Durham. Newrick and Blackburn, architects, 58 John Street, Sunderland: I. Berriman, Fence Houses, Co. Durham.

**Uttroter, Staffs.**—Repair of fire damage at the Old Maltings, in the Brewery Yard, for U.D.C.: O'Dair Bros., Ltd., Uttroter Road, Tean, Stoke-on-Trent, £3,062 (recommended).

**Wakefield, Yorks.**—Erection of The Mitre public-house at Southgate, for Joshua Tetley and Son, Ltd.: Walter G. Birch (Harrogate), Ltd., Wakefield. Kitson, Parish, Legard and Pyman, architects, Lloyds Bank Chambers, Vicar Lane, Leeds, 1, and E. R. Babbis and Sons, quantity surveyors, 10-12 East Parade, Leeds, 1.

**Warwickshire.**—Erection of an assembly hall and school-meals kitchen at Polesworth Nethersole's C.E. Infants' School, for E.C.: H. J. Bray, Ltd., Watling Street, Wilnecote, Tamworth, £10,559.

**Wellingborough, Northants.**—Erection of one block of seven Batley garages, Baker Crescent, Irchester, for R.D.C. C. L. Hanwell, surveyor: R. Bridgman and Co.,

Wollaston, £743 (accepted, subject to Ministry approval); Elliott and Dobbs, £771; Wellingborough Industrial Co-operative, £872; Gayton and Bedford, £875. Work commencing August.

**Wimbledon, Surrey.**—Development of a shopping centre at Wimbledon Broadway, on the site formerly occupied by Cawdells, for the Ronald Lyon Property Investment Company. Work provides for a building with basement car park, with shopping hall on ground and mezzanine floors and a six-storey tower block of offices: Ronald Lyon Construction, Lyon House, Lyon Road, Hersham, Surrey. Estimated cost £600,000.

**Worthing, Sussex.**—Erection of hatted classrooms at the new Davison C.E. School, for B.C.: Swiftplan, Ltd., 39 Victoria Street, London, S.W.1, £4,680 (recommended).

#### DEMOLITION

**Ashton-under-Lyne, Lancs.**—Demolition of following properties, for B.C.: 20-28 Park Parade, 46-50 Park Street and 1-3 Booth Street, and 24-30 Dale Street, 52-56 Welbeck Street, 1-5 Welbeck Court, 161-163 Cotton Street, 106-112 Margaret Street, 4-6 Margaret Avenue, 2, 136-138 Brook Street, 98-104 Margaret Street, 39-41 Brook Street, 1-3 Margaret Avenue, 1, 32-34 Hodgson Street, and chimney stack of 30 Hodgson Street—J. Schofield, Stalybridge, £60 and £150, respectively; 317 Katherine Street and 22 Richmond Street—F. Gaunt and Sons, County Bridge, Dukinfield, £20; 99-103 Newmarket Road—J. Dean, Ashton-under-Lyne, £20.

**Crawley, Sussex.**—Demolition of the disused reservoir at Horsham Road, for North-West Sussex Water Board. This is a brick and concrete structure measuring approximately 78ft. by 60ft. by 13ft. deep (approximate hardcore content 650 cu. yd.). It is intended that the reservoir shall be demolished to floor level and the site filled and levelled: F. J. Dunkerton, Ltd., Nowhurst Quarries, Broadbridge Heath, Horsham, Sussex, £280 (accepted); William Abbott, £687; Advance Plant Contractors, £500; C. Birch, £300; Alan E. Coles, £1,949; Foster Bros. (Hook), Ltd., £1,500; A. E. Gash and Co., Ltd., £854; Hall and Co., £734; John Husband and Co., £3,150; J. E. Murphy, Ltd., £372; H. Pannett (C.E.), Ltd., £900; Pickford Demolition, £770; D. W. Stone, Ltd., £312; "W" Demolitions, Ltd., £2,500.

**Lowestoft, Suffolk.**—Demolition of 186-188 London Road North, for B.C.: G. A. Easter (Demolitions), Ltd., 2 Windsor Road, Middleton Lane, Norwich, £345 (recommended).

**Maidstone, Kent.**—Demolition of 62-67 Church Street, Tovil, for B.C.: S. W. Waters, 92 Melville Road, Maidstone, £236 (recommended).

**Sunderland, Dur.**—Demolition and clearance of the sites of 187 properties, being phases 1, 2, and 3 of the demolition and clearance of the sites of properties included in the Sunderland (Deptford area) Compulsory Purchase Order, for B.C.: T. H. Cooper (Sand and Gravel), Ltd., 48 Dundas Street, Sunderland, £935 (recommended).

**Todmorden, Yorks.**—Demolition of 2-12 Mount Pleasant, and 5 and 7 Causeway Wood, for B.C.: Brian Sutcliffe, 91 Bridge Lanes, Hebden Bridge, Yorks.

**Worthing, Sussex.**—Demolition of Brookdean at Meadow Road, for B.C.: K. Mikolay and Son, £90 (recommended).

**Wortley, Yorks.**—Demolition of properties at Potter Hill Camp, High Green, for R.D.C.: Bailey Bros., Wombwell, Yorks., £300. Work has commenced.

#### ELECTRICAL

**Durham.**—Electrical work in the following schools, for Co. E.C.: Durham Girls' Grammar—Tanjon (Newcastle), Ltd., Newcastle upon Tyne, £7,842; Ryhope Modern—North of England Engineering and Electrical Co., Ltd., Ferryhill, £945; Newton Aycliffe Campus—Williams Bros., Ltd., Newcastle upon Tyne, £7,211; Seaham Branch Library—E. Phillips, Ltd., West Hartlepool, £860.

**Maidstone, Kent.**—Electrical installations in 40 old people's bungalows (scheme P.W.8) at Park Wood estate, for B.C.: H. T. Barden Ltd., £799 (recommended).

**Newport, Mon.**—Installation of a control and indicator circuit cable from the Court Farm treatment plant to the Lantrisant intake, for B.C.: Associated Electrical Industries, Ltd., 33 Grosvenor Place, London, S.W.1, £9,334 (recommended).

**Peterborough.**—Electrical installation in the first instalment of Werrington County Primary School, for the Joint Education Board: R. S. Feetham (Stamford), Ltd., 31 High Street, Stamford, £3,729.

**Peterborough.**—Electrical services for boiler house and mortuary block at the Memorial Hospital, for the East Anglian Regional Hospital Board: Mann Egerton and Co., Ltd., Norwich, £10,076 (recommended).

**Seaham, Dur.**—Electrical wiring of 46 Homeville houses and flats in the central area, for U.D.C.: J. Calvert (Electrical), Ltd., Church Street, Seaham.

**Sedgefield, Dur.**—Electrical installation in new kitchen at Winterton Hospital, for the Newcastle upon Tyne Regional Hospital Board: Paterson and Co., Ltd., Darlington, £1,431.

**Stockport, Ches.**—Electrical installation, contracts 48a and 48b, Brinnington neighbourhood unit, for B.C.: Simmons Electrical Contracting Co., Ltd., 479 Middleton Road, Chadderton, Oldham, Lancs., £3,230 and £2,896, respectively (recommended, in lieu of previous tender).

#### FENCING

**Croydon, Surrey.**—Chain link fencing for St. Joseph's R.C. Primary School at Crown Dale, for B.C.: Vardale Fencing Co., Ltd., 72 Verney Road, London, S.E.16, £267 (accepted); Allen (Fencing), Ltd., £280; Darlington Fencing Co., Ltd., £293; Truscott Fencing Co., £351.

**Portsmouth.**—Provision of new concrete post and panel fence at Eastney Pumping Station on the new boundary, for City Council: Direct Labour (recommended). Estimated cost £2,500.

**Tottenham, Middx.**—Fencing at Grammar School, for C.C.: Bell and Webster, Ltd., Essex Road, Hoddesdon, Herts., £1,390 (recommended).

**Worthing, Sussex.**—Supply and erection of fencing on the northern boundary of West Park recreation ground, for B.C.: Truscott Fencing and Productions, Ltd., Station Road, Dorking, Surrey, £946 (recommended).

#### GAS AND WATER SUPPLY

**Llandudno, Caerns.**—Laying of new mains to provide improved water supply to certain

areas on the Great Orme, for U.D.C.: Direct Labour (recommended). Estimated cost £1,800.

**Middlesbrough, Yorks.**—Supply of a diesel alternator for the new Lartington gravity filtration plant, for The Tees Valley and Cleveland Water Board: Davey Paxman and Co., Colchester, £10,863.

**Radnorshire.**—Installation of a new water supply scheme at Bleddfa, Knighton, for C.C.: Evans, Ingham and Rudge, Cambrian House, Llandrindod Wells, £1,790.

**St. Neots, Hunts.**—Construction of a reinforced concrete water tower, capacity 75,000 gallons, height approximately 60ft., at Covington, for R.D.C.: Pick, Everard, Keay and Gimson, consulting engineers, 6 Millstone Lane, Leicester: F.C. Construction Co., Ltd., City Road, Derby, £14,067 (recommended); Vibrated Concrete Construction Co., Ltd., £14,441; Frank Hickman and Co., Ltd., £14,912; H. C. Jones, Ltd., £15,343; Nicholson Construction Co., Ltd., £15,610; Thomas Lowe and Sons, Ltd., £17,455; J. A. Stirling, Ltd., £17,601. Work commencing four to six weeks.

#### HARBOURS, PIERS AND SEA DEFENCE WORKS

**Portsmouth.**—Fitting-out berth at the Inner Camber, for City Council: Sir John Jackson, Ltd., Westminster, London, S.W.1, £26,993 (recommended); Gray, Conoley and Co., Ltd., £30,488; Sir Lindsay Parkinson and Co., Ltd., £32,165; Alderton Construction Co., Ltd., £34,251; A. E. Farr, Ltd., £34,413; Reed and Mallik, Ltd., £34,901; Mears Bros. (Contractors), Ltd., £34,996.

**Worthing, Sussex.**—Construction of sea defences, for B.C.: Z. Peskett and Sons, Ltd., Angmering, Rustington, Littlehampton, £5,985 (recommended).

#### HEATING AND VENTILATING

**Maidstone, Kent.**—Supply and installation of two oil-fired boilers at the museum and art gallery, for B.C.: H. J. Cash and Co., Ltd., Caxton House, Westminster, London, S.W.1, £3,460 (recommended).

**Peterborough.**—Following works for the boiler house and mortuary block at the Memorial Hospital, for the East Anglian Regional Hospital Board: Mechanical engineering services—Baker Perkins, Ltd., Westwood Works, Peterborough, £67,727; boilers and oil-firing plant—Danks of Netherton, Ltd., Netherton, Cradley Heath, £32,848 (recommended).

**Southport, Lancs.**—Supply of hot and cold water to shower and changing room block at King George V Grammar School, for B.C.: Graham and Caddick, Ltd., 78 Zetland Street, Southport, £785 (recommended).

#### HOUSING SCHEMES

**Ashton-under-Lyne, Lancs.**—Fourteen single-bedroom bungalows at Burgess Avenue, for B.C.: Egerton Construction Co., Ltd., Melbourne Street, Denton, Manchester, £12,740 (recommended, subject to Ministry approval).

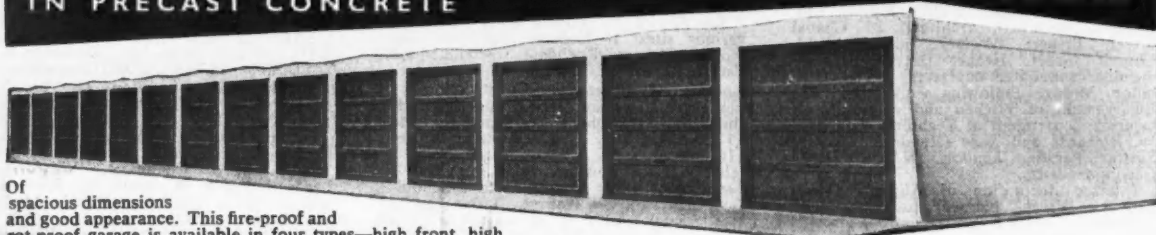
**Barnard Castle, Dur.**—Further 12 houses, for the North-Eastern Housing Association, P. L. Browne, Son and Harding, architects, Pearl Buildings, Northumberland Street, Newcastle upon Tyne: R. C. Williamson, Ltd., Rowlands Gill, Co. Durham.

**Bathavon, Som.**—Six houses, Fairy Hill Compton Dando, for R.D.C.: P. Kennerell

## MARLEY MULTIPLE GARAGES

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Pope, architects: A. Evans, High Littleton, near Bristol, £10,708 (accepted); Iles and Phelps, Ltd., £10,997; J. Crozier, Ltd., £12,819.

**Corby, Northants.**—Block of eight police flats adjacent to Corby Police Station, for the Standing Joint Committee: A. J. G. Potter and Sons, Ltd., High Street, Stanwick, Raunds, £20,920. Work commencing July.

**Glasgow.**—Sixty-three single persons' flats at Dougie Road, Castlemilk, for City Council: Direct Labour. Estimated cost £100,800.

**King's Lynn, Norfolk.**—Two semi-detached houses at Lynn County Technical College for the caretaker and assistant caretaker, for Co. E.C.: Warren Bros., Clenchwarton, King's Lynn, £3,900 (recommended).

**Maidstone, Kent.**—Erection of 40 Homeville-type single bedroom flats at Ringstone estate, for B.C.: P. A. Barden and Sons, Ltd., Weaving House, Ashford Road, Maidstone, £46,141 (recommended).

**Morpeth, Northumb.**—Eighteen houses at Mitford, for R.D.C.: J. R. Miles, surveyor: Cussins, Ltd., The Drive, Gosforth (subject to Ministry approval).

**Nantwich, Ches.**—Fourteen bungalows off Mere Street, Haslington, together with the construction of roadworks, sewers, etc., for R.D.C.: J. Finney and Sons, St. Georges Road, Winsford, £15,075.

**Newport, Mon.**—Following works, for B.C.: 12 houses at Ringland estate—Davies and Screen (Builders and Contractors), Ltd., 89 Commercial Street, Risca, Newport, £20,251 (recommended).

Conversion of 48 flats into 24 houses—Direct Labour, £5,238 (recommended).

**Reigate, Surrey.**—Superstructure and site works for one block of 16 four-storey maisonnettes and one block of eight four-storey maisonnettes with stores under at The Dome estate, for B.C.: G. G. Sander-son, borough engineer and surveyor: S. G. and A. Agombar, Tulse House, Elmers End Road, Beckenham, Kent, £48,039 (accepted); Greenaway and Sons, Ltd., £52,330; Mitchell (Chipsstead), Ltd., £48,550; H. G. Winteridge and Co., Ltd., £51,503.

**Saffron Walden, Essex.**—(a) Sixteen houses and services, and (b) roads and sewers. Basil I. Briggs, architect, 7 High Street, Great Dunmow: (a) T. J. Archer and Co., Ltd., Tilbury Green, Ridgewell, Halstead, Essex, £34,465 (accepted); L. Trundle, Ltd., £34,963; J. A. Elliott and Co., Ltd., £37,084; F. Faircloth and Son, £38,164; Rooke and Son, £40,072. (b) J. A. Elliott and Co., Ltd., Stanstead Road, Bishops Stortford, Herts., £7,086 (accepted); F. B. Sennett, £7,336; Holmes Bros., £7,474; Faircloth and Son, £7,565; E. C. P. Brand, £7,831; East Anglian Road Stone Co., £7,887; Rooke and Son, £8,620; E. and S. Butler, £9,729. Work to commence July 1.

**Salisbury, Wilts.**—Seventy-four houses on the Bishopdown estate, for City Council: A. J. Dunning and Son (Weyhill), Ltd., Weyhill, Andover, Hants, £107,931. Work about to commence.

**Seaton Valley, Northumb.**—Forty-eight houses at Cramlington, for U.D.C.: T. W. Burgess, surveyor: John Twiname, Ltd., 46 Heaton Road, Newcastle upon Tyne (subject to Ministry approval).

**Southport, Lancs.**—Twenty-one dwellings on the Staveley Road housing site, for B.C.: Sir Robert Lloyd and Co., Ltd., Port Causeway, Bromborough, Ches., £37,707 (recommended, subject to Ministry approval).

**Stockport, Ches.**—Provision of reinforced concrete floors, contract 48b, Brinnington neighbourhood unit, for B.C.: Matthews and Mumby, Ltd., Oldham Street, Denton, Manchester, £1,175 (recommended).

**Swadlincote, Derbys.**—Fifty-eight traditional dwellings on the Abbots Farm housing estate, Newhall, comprising seven pairs of type Z two-bedroom houses and 22 pairs of type R/1 three-bedroom houses, for U.D.C.: J. W. May, engineer: R. Guilford, Ltd., Ascot Drive, Derby, £87,000.

**Wandsworth.**—Fourteen maisonnettes in a four-storey block at Alton estate extension, and conversion of Sherwood Lodge into four flats, together with seven tenants' stores, 15 garages and a play space, for L.C.C.: H. T. Oliver and Sons, Ltd., 371 Clapham Road, London, S.W.9, £43,580 (accepted); Greenaway and Son, Ltd., £44,500; Poolman (Builders), Ltd., £46,170; W. H. Gaze and Sons, Ltd., £46,981; Speirs, Ltd., £47,474; A. T. Rowley (London), Ltd., £47,754; J. Jarvis and Sons, Ltd., £47,988; Carlton Contractors, Ltd., £48,279; R. Mansell, Ltd., £48,472; Thomas McInerney and Sons, Ltd., £49,363.

**Warwick.**—Nineteen three-bedroom two-storey units, 12 one-storey bed-sitting room units; five one-storey one-bedroom units, laundry block, access road and nine brick garages at Percy estate, central area, site A, for B.C.: H. S. Brown, borough engineer, surveyor and water engineer: Eureka Contracting Co., 97 Dennis Road, Birmingham, 12, £68,016 (recommended).

#### MATERIALS AND SUPPLIES

**Newcastle upon Tyne.**—Supply of 850 galvanised mild steel dustbins for six months, for City Council: A. J. Wares, Ltd., King Street, South Shields, £1,329 (recommended).

#### PLANT AND MECHANICAL TRANSPORT

**Newcastle upon Tyne.**—Supply of following, for City Council: One Aveling-Barford TRU diesel road roller—Aveling-Barford, Ltd., Grantham, £2,282; two Thwaites 15cwt. diesel engine dumpers—F. Gibson and Co. (Newcastle), Ltd., Haddricks Mill Road, Gosforth, Newcastle, 3, £589 per pair; two air pumps—Service Engines (Newcastle), Ltd., Great Lime Road, Newcastle, 12, £1,854 per pair; supply of borehole equipment for site investigation—Piling and Construction Co., Ltd., 111 St. James's Road, West Croydon, Surrey, £1,526 (all recommended).

**Portsmouth.**—Supply of the following, for City Council: One hydraulic petrol engine appliance—Dennis Bros. Ltd., Guildford, £10,553; one tractor-mounted compressor, complete with trailer—Gordon Motors, Ltd., Southampton Road, Cosham, Portsmouth, £1,278; one high-speed router—Hoopers (Portsmouth), Ltd., 101 Kingston Road, Portsmouth, £696 (recommended).

**Southport, Lancs.**—Supply of a Dennis Paxit Major II refuse collection vehicle, fitted with a storage compartment at rear of cab, for B.C.: Dennis Bros., Ltd., Guildford, Surrey, £3,285 (recommended).

**Worthing, Sussex.**—Supply of the following, for B.C.: One Karrier Gamecock refuse vehicle, one Karrier Gamecock vehicle with lift attachment and three salvage trailers—Thos. Harrington, Ltd., Broadwater Road, Worthing, £2,421, £3,051 and £550, respectively; 4-ton Bedford chassis

with pantechon body—H. D. Steefe and and Son, Ltd., 18 Railway Approach, Worthing, £1,364 (recommended).

#### PLAYING FIELDS, PARKS, ETC.

**Bristol.**—Provision of grassed areas at rear of three- and four-storey flats at Bishop Avenue and Dowling Road, Hartcliffe, Deering Close, Lawrence Weston, and Fulford Road, Hartcliffe, for City Council: Couldridge Bros., Newnham Nurseries, Stockwood Vale, Keynsham, £1,075 (recommended).

**Cornwall.**—Levelling and cultivating playing fields for Bodmin Secondary School, for C.C.: S. C. Lovell, The Nook, Maenporth, Falmouth.

**Southgate, Middx.**—Laying out of playing fields at County School, for C.C.: Hugh Pearl (Contractors), Ltd., £3,618 (recommended).

#### RAILWAY ENGINEERING

**British Railways.**—Following contracts placed: Eastern Region:

Supply, installation and maintenance of one type 1301 computer with magnetic drum, card feed, line printer, output punch and 400 words of immediate access store for Machine Accounting Centre, Regional Accountant's Department, Peterborough—International Computers and Tabulators, Ltd., Gloucester House, 149 Park Lane, London, W.1.

Cleaning and mechanical pointing of the linings of Gasworks Tunnel and Copenhagen Tunnel (up fast and up slow lines), between King's Cross and Finsbury Park—Wellerman Bros., Ltd., Dun Street, Sheffield, 3.

Supply of Arki-Endon tracklaying cranes and associated equipment—Kennion, Irvine and Co., Ltd., 75 Victoria Street, London, S.W.1.

Repairs to main girders and flooring of underbridge 1837 between Whittlesea and Peterborough (East)—Carter-Horsley (Engineers), Ltd., Merebank Lane, Waddon, Croydon, Surrey.

Provision of new staff accommodation building in 9 and 10 carriage sidings and Nunnery carriage sidings at Sheffield (Victoria)—W. Malthouse, Ltd., Cliffe Field Works, Derkshire Lane, Sheffield, 8.

Resurfacing of roadways in the Sheffield district—Tarslag, Ltd., Upper Wortley Road, Rotherham.

Supply and erection of electrical installation, M.V. distribution, fuelling installation, control wiring for washer etc., at Billet Sidings, Stratford. E.15—James Kilpatrick and Son, Ltd., 164-168 Westminster Bridge Road, London, S.E.1.

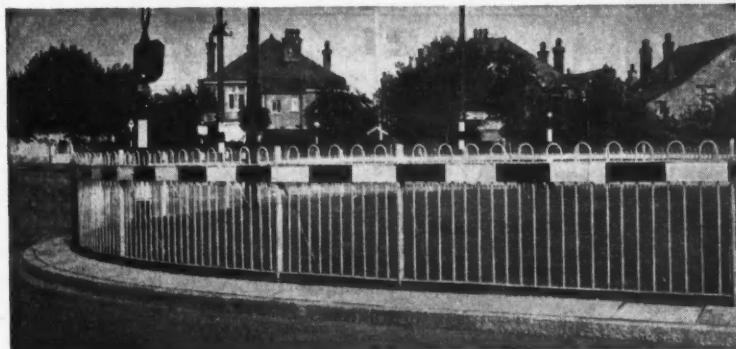
Supply of two Matisa ballast cleaning machines and associated equipment—Matisa Equipment, Ltd., Hanworth Lane, Chertsey, Surrey.

#### Southern Region:

Waterloo: reconstruction of Carlisle Lane Bridge—Leonard Fairclough (London), Ltd., London, N.W.5.

Fawley Branch Line: construction of new freight loops—Eagre Construction Co., Ltd., Scunthorpe, Lincs.

Clapham Junction: paving of walkways—E. C. MacDermot and Co., Wembley, Middx.; Fishbourne, Isle of Wight: new car park—Vectis Stone Co., Newport, I. of W.



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Peckham Rye: reconstruction or platforms—Geo. Wimpey and Co., Ltd., London, W.6.

Portsmouth Harbour Station: painting of sub-structure—Maurice Hill, Ltd., Horddean, Hants.

Portsmouth Harbour: repairs to concrete piles—The Cement Gun Co., Ltd., Hanworth, Middx.

Henfield: reconstruction of Great Clapper Hole Bridge—Caffin and Co., Ltd., London, W.C.2.

Oxshott: new car park—W. H. Gaze and Sons, Ltd., London, S.W.15.

Richborough: new signal box—The Demolition and Construction Co., Ltd., London, S.W.1.

Ashford Marshalling Yard: new lighting towers—British Insulated Callender's Construction Co., Ltd., London, W.C.1.

Brighton district: resurfacing and surface dressing of roads, footpaths and station platforms—A. C. W. Hobman and Co., Ltd., London, E.C.4.

#### ROADS, BRIDGES AND SITE WORKS

Ballymoney, Antrim.—Tar spraying of streets, for U.D.C.: William G. Killough, Killea, 73d, per yd.

Blackpool, Lancs.—Making-up of five private streets (approximate length 290 lin. yd.) for B.C.: Arthur Hamilton, borough surveyor: Hammond Heaton and Co., Ltd., Cowley Road, Blackpool, £4,657.

Burnley, Lancs.—Construction of Inner Ring Road, stage 1, for B.C.: A. G. Richardson, borough engineer: W. Snape and Sons, Ltd., Clifton Road, Eccles. Estimated cost £80,000. Work commencing early July.

Bury St. Edmunds, Suffolk.—Hard surfacing and certain drainage works in the playfield parking area, for B.C.: May, Gurney and Co., Ltd., Trowse, Norwich, £11,696 (subject to Ministry approval).

Cannock, Staffs.—Spraying on carriageways of an approximate quantity of 20,000 gallons of tar plus 10 per cent. bitumen during July, for U.D.C.: E. Lomax, engineer and surveyor: Anglo-American Asphalt Co., Ltd., Shenstone, near Lichfield, £1,723. Work commencing first week in July.

Cardiff.—Following works, for City Council: Improvement of Pwllmelin Road, stage 2—J. J. Gallagher and Co., Ltd., 38 Lea Road, Birmingham, 11, £25,327; advance preparation works at Penarth Road industrial estate, part 1—E. Light and Sons, Ltd., 15a Clive Road, Cardiff, £29,278; improvement of Fidas Road—J. A. Crone, Ltd., 39-51 Cathays Terrace, Cardiff, £21,723 (recommended).

Construction of footpath to Woodlands E.S.N. School—Direct Labour (recommended). Estimated cost £6,000.

Cheshire.—Construction of a three-span bridge over the railway, adjacent to Ellesmere Port level crossing on the Chester-Ellesmere Port Road, A.5032, for C.C.: C. G. Day, county surveyor—Thomas Ashley (Contractors), Ltd., Hartford, Northwich, Ches., £95,297. Work has commenced.

Coleraine, Londonderry.—Reconstruction of Upper and Lower Captain Street, for B.C.: R. J. Maxwell and Sons, Ltd., Bushmills Road, Coleraine.

Croydon, Surrey.—Reconstruction and resurfacing of playground at the South Norwood Infants' School at Birchanger Road, for B.C.: Allmacadams, Ltd., 332 Brighton Road, South Croydon, £1,485 (accepted); A. C. W. Hobman and Co., Ltd., £1,523; Chittenden and Simmonds, Ltd., £1,579; William F. Rees, Ltd., £1,668; Constable Hart and Co., Ltd., £1,708; H. Hemmings, Ltd., £1,787.

Dartford, Kent.—Construction of 721 sq. yd. of hardcore and tarmacadam roadway and 458 sq. yd. of tarmacadam paths, together with surface water drainage, to serve six bungalows at Gore Road, Darenth, for F. Stevenson and Son, Ltd.: Hodsons, Ltd., 17 Wrotham Road, Gravesend (extension of contract).

Glossop, Derbys.—Surfacing of various roads, for B.C., amounting to 6,190 sq. yd. of cold asphalt and 2,400 sq. yd. of bitumen macadam (1,700 sq. yd. machine laid and 700 sq. yd. hand laid), together with various fillings to channels: Bituminous Surfacing, Ltd., 7 Lime Bank Street, Manchester, 12, £2,317. Work to commence Aug. 2.

Huddersfield, Yorks.—Permanent reinstatement of footways within the borough, for B.C.: A. L. Percy, borough engineer and surveyor: E. Dickinson and Sons, Windybank, Netherton, near Wakefield, Yorks.

Kent.—Construction of a prestressed concrete bridge, near Rochester, for M.T.: Christiani and Nielsen, Ltd., and J. L. Kier and Co., Ltd., £2,325,931.

Lowestoft, Suffolk.—(a) Making-up of part of Bishops Walk and The Meads, and (b) Ship Road (parts A and B) and (c) laying of base surface of sand asphalt in Somerleyton Road, for B.C.: East Anglian Roadstone and Transport Co., Ltd., 68 Bracondale, Norwich, (a) £4,442, (b) £3,235 and (c) £4 19s. 10d. per ton (recommended).

Neath, Glam.—Surface dressing of approximately 45,000 sq. yd. of roads in the borough, for B.C.: D. Bailey, borough engineer: W. and J. Glossop, Ltd., Court Road, Bridgend, Glam.

Nelson, Lancs.—Resurfacing of Hibson Road, from Princess Street to Lancaster Gate, and construction of carriageway through station forecourt from Hibson Road to Railway Street, for B.C.: Trinidad Lake Asphalt Co.

(North Western), Ltd., India Buildings, Water Street, Liverpool, 2, £1,674 and £654, respectively (recommended).

Northampton.—Construction of the following, for B.C.: Approximately 320 lin. yd. of dual carriageway road with concrete foundation and asphalt surfacing, comprising the second section of the link road between Bridge Street, A.50, and Black Lion Hill, A.45, together with incidental works: H. C. Jones, Ltd., 183 High Town Road, Luton, £54,646. Work commencing June 27.

Oxford.—Following works, for City Council: Site works and construction of an access road to garages at rear of Ulfgar Road—Amey's Asphalt Co., Ltd., Lower Wootton, Oxford, £1,660; roads and sewers at Cowley Centre—William T. Nicholls, Ltd., St. Paul's Road, Gloucester, £103,984 (recommended).

Poplar.—Road and sewer works at Alton Street site, for L.C.C.: Fitzpatrick and Son (Contractors), Ltd., 455 Old Ford Road, London, E.3, £26,324 (accepted); Mowlem (Civil Engineering), Ltd., £29,842; J. Murphy and Sons, Ltd., £31,277; W. and J. Glossop, Ltd., £31,906; J. C. Billings and Co., Ltd., £31,987; A. Waddington and Son, Ltd., £32,582; W. and C. French, Ltd., £38,914; The Demolition and Construction Co., Ltd., £41,261.

Portsmouth.—Tram track removal in Highland Road from Festing Road to Haslemere Road, and reconstruction of Clock Street from The Hard to Havant Street and of part of Wickham Street north of its junction with Clock Street, for City Council: Direct Labour (recommended). Estimated cost £10,000 and £4,250, respectively.

Southport, Lancs.—Street works in parts of Chatsworth Road and Osborne Road, for B.C.: R. and J. Bradley (Contractors), Ltd., Armoury Bank, Ashton-in-Makerfield, £3,271.

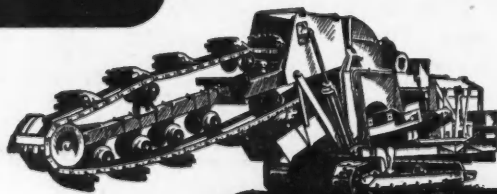
#### SEWERAGE, SEWAGE AND REFUSE DISPOSAL

Birmingham.—Supply and installation of four stereophagus pumps and supply of concrete segmental rings for Argyle Street Pumping Station, for City Council: Hathorn Davy and Co., Ltd., 540 Mosley Road, Calthorpe, Birmingham, 12, and Empire Stone Co., Ltd., 119 Hagley Road, Edgbaston, Birmingham, 15, respectively.

Blackpool, Lancs.—Construction of approximately 750 lin. yd. of 36in. and 42in. diameter concrete pipe sewer, and nine manholes, up to depths of 14ft., partly in the carriageway, in the Mossom Lane area, for B.C.: Arthur Hamilton, borough surveyor: M.R.O. Construction Co., Ltd., Stampstone Street, Oldham, £24,381.

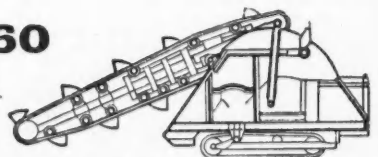
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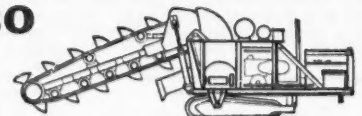
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16in. to 60in.  
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depth.



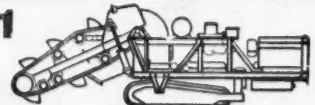
**14-30**

14in. to 30in.  
wide.  
8ft. 6in. max.  
depth.



**12-21**

12in. to 21in.  
wide.  
6ft. max. depth.



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**Bodmin, Corn.**—Westheath sewerage scheme, for B.C., comprising the provision and laying of 577 lin. yd. of 9in. diameter and 246 lin. yd. of 12in. diameter stoneware sewers, 600 lin. yd. of 12in. by 18in. concrete egg-shaped sewers and the construction of 17 manholes, together with a sewage disposal works, comprising concrete tanks, conventional biological filters, drying beds, and ancillary works. G. H. Ivory and Partners, consulting engineers, 24 Athenaeum Street, Plymouth: F. W. Hunt, Penrose, Clinton Road, Redruth, Corn., £32,149 (accepted); Richard Costain (Construction), Ltd., £32,705; Aubrey Long, Ltd., £36,029; Humphreys, Ltd., £36,343; Devon Contractors, Ltd., £39,821; John Garret and Sons, Ltd., £43,244.

**Hailsham, Sussex.**—Alfriston sewerage scheme, for R.D.C., comprising the construction of 3,925yd. of 9in. and 6in. diameter stoneware sewers, one underground sewage pumping station, 1,403yd. of 5in. diameter asbestos-cement pumping main and a sewage works to serve a population of 1,200, consisting of two detritus chambers, one sewage flow recorder, two rectangular settling tanks, one dosing chamber, two circular filter beds, two rectangular humus tanks, five sludge drying beds, one sludge liquor pumping station, effluent sewer and ancillary works. A. S. Meanley, engineer and surveyor: George S. Dicker (Engineers), Ltd., 137 Hughenden Road, Hastings, £47,780 (recommended, subject to Ministry approval). Work commencing July.

**Newport, Mon.**—(a) Provision of screens and equipment at the Llantrisant intake, and (b) certain valves for the Court Farm treatment works, for B.C.: (a) F. W. Brackett and Co., Ltd., Hythe Station Road, Colchester, Essex, £6,300; (b) Glenfield and Kennedy, Ltd., Low Glencairn Street, Kilmarnock, Ayr., £5,170, and Guest and Chimes, Ltd., Rotherham Works, £2,750, respectively (recommended).

**Rothwell, Yorks.**—Construction of 131 lin. yd. of 9in. diameter and 260 lin. yd. of 12in. diameter s.g. sewers, and 226 lin. yd. of 12in. diameter spun-iron pipes, together with manholes and a storm overflow chamber at Eshald Lane, Woodlesford, for U.D.C. A. D. W. Dibble, engineer: William Birch and Sons, Ltd., Spen Lane, York, £4,619. Work has commenced.

**Skipton, Yorks.**—Cracoe Hutton and Rylstone joint sewerage scheme, for R.D.C., comprising construction of approximately 6,360 lin. yd. of 6in. glazed ware sewers, 440 lin. yd. of 6in. iron sewers and 93 brick manholes, together with a new sewage disposal works, comprising detritus tank, settlement tanks, percolating filters, storm water tanks,

humus tanks, sludge drying bays and other appurtenant works. T. Yeardon, engineer and surveyor: Laeven, Ltd., 51 Foundry Street, Dewsbury, £23,258. Work commencing at the end of the month.

**Stourbridge, Worcs.**—Duplication of southern main sewer comprising the supply and laying of approximately 1,670yd. of 9in., 12in. and 15in. diameter sewers and manholes, for the Stourbridge Drainage Board, John H. Haiste and Partners, consulting engineers, 10c Hagley Road: Droitwich Construction Co., Ltd., Wolverhampton, £10,371.

**Swanscombe, Kent.**—Improvements to sewage works, for U.D.C.: T.H. Contractors, Ltd., 277 Chiswick High Road, London, W.4, £102,082.

**Tenterden, Kent.**—Main drainage of Rolvenden Hill bungalows, T30/6 contract 1, for R.D.C., comprising the laying of approximately 500 lin. yd. of small diameter sewers, the construction of a sewage disposal works and other ancillary works. Howard Humphreys and Sons, consulting engineers, Victoria Station House, Victoria Street, Westminster, S.W.1; W. P. Woodgate, Ltd., High Halden, Kent, £6,612 (accepted); Bowzell, Ltd., £7,413; J. M. Hale, £7,375; Johnson Bros. (Aylesford), Ltd., £8,088; Richard Costain, Ltd., £8,195. Work commencing July.

**Yeovil, Som.**—Construction of the Martock, Montacute and Stoke-sub-Hamdon sewerage and sewage disposal scheme, for R.D.C. Harvey McGill and Hayes, consulting engineers, 38 Market Place, Chippenham: Nott, Brodie and Co., Ltd., Sheene Road Works, Malago Vale, St. John's Lane, Bristol, 3, £50,613. Work has commenced.

#### STREET LIGHTING

**Cardiff.**—Supply of (a) post top lanterns, and (b) auxiliary control gear sets for class B side road lighting during 1960-61, for City Council: (a) Eleco, Ltd., St. Albans, Herts., £6 11s. 6d. each; (b) Wardle Engineering Co., Ltd., Elsinore Road, Manchester, 16, £1 7s. 5d. per set (recommended).

**Longbenton, Northumb.**—Supply and erection of 104 sodium vapour lighting units for lighting schemes from Palmersville to Holy-stone and in Station Road from Burradon to Fordley Roundabout, for U.D.C.: Engineering and Lighting Equipment Co., Ltd., Campfield Road, St. Albans, Herts.

**Maidstone, Kent.**—Installation of a further 16 group B lanterns at Park Wood estate, for B.C.: Siemens Edison Swan, Ltd., 155 Charing Cross Road, London, W.C.2 (recommended, subject to Ministry approval). Estimated cost £920.

#### GOVERNMENT CONTRACTS

**Air Ministry.**—Contracts to the value of £500 or over for the weeks ended June 3 and 10:

Building works at: Fylingdales, Yorks.—George Wimpey and Co., Ltd., Ham-mersmith Grove London, W.6; London Airport, Hounslow, Middx.—John Howard and Co., Ltd., 13 Buckingham Gate, London, S.W.1; Boscombe Down, Wilts.—James and Crockerell, Ltd., Durrington, Salisbury, Wilts.; Ballykelly, Limavady—McRoberts and Armstrong, 18 Lower Windsor Avenue, Belfast, 9; Thorney Island, Emsworth, Hants—Marsh (Emsworth), Ltd., 31a North Street, Emsworth, Hants; Feltwell, etc. (Norfolk), Mepal (Cambs.), Tuddenham, etc., Suffolk—Thomas C. Stewart (Contractors), Ltd., The Industrial Estate, Newmarket Road, Bury St. Edmunds, Suffolk; Watton, Norfolk—Petter Bros., E. Dereham, Norfolk; Bawdsey, Suffolk R. G. Carter, Ltd., Drayton, Norwich, Norfolk; London Airport, Hounslow, Middx.—Taylor Woodrow Construction, Ltd., Ruislip Road, Southall, Middx.; Grenham Common, Berks.—John Mowlem and Co., Ltd., 91 Ebury Bridge Road, London, S.W.1; Watton, Norfolk—Walter Lawrence and Son, Ltd., Ventnor House, London Street, Swaffham, Norfolk; Barnham, Norfolk—Walter Lawrence and Son, Ltd., Ventnor House, London Street, Swaffham, Norfolk.

Artificers' work: West Raynham (Norfolk), etc.—Walter Lawrence and Son, Ltd., Ventnor House, London Street, Swaffham, Norfolk; R.A.F. Records Office, Barnwood, Glos.—Spencer (Contractors), Ltd., 408 Swindon Road, Cheltenham, Glos.; Hornchurch, Essex—Haymills (Contractors), Ltd., Hanger Green, Western Avenue, Ealing, London, W.5.

Extension to heating scheme: Boscombe Down, Wilts.—Richard Crittall and Co., Ltd., 151 Great Portland Street, London, W.1.

Thermal insulation boilers—maintenance work: R.A.F. Stations and establishments within headquarters, Air Ministry Directorate-General of Works, 6 Works Area, Rose Duryard, Argyll Road, Exeter, 7—Kitson's Insulations, Ltd., Econeite Works, London Road, Barking, Essex.

Painting work: Wattisham (Suffolk), etc.—Donald Humberstone and Co., Ltd., North Somercotes, Louth, Lincs.

**Ministry of Finance, Northern Ireland.**—Contracts exceeding £250 in value placed during the period May 23 to June 3, inclusive:



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Supply, etc., aluminium alloy windows: Petty Sessions Courts, Belfast, 1—Gardiner, Sons and Co., Ltd., G.P.O. Box 140, Broad Plain, Bristol, 2, Glos.

Electrical installations: County Court-house, Omagh, The Rotary Electric Co., Ltd., 58 Waring Street, Belfast, 1.

Tarmac surfacing and spraying of roads, areas, etc.: Louhgal Manor estate, Armagh—T. G. Troughton, Ballinteggart House, Portadown.

Electrical installation, apiary house: Greenmount Agricultural College—Gilmore and Co., 35 Fountain Street, Belfast, 1.

Provision of water supply to 12 cottages, s. and s. scheme 15: Omagh, Co. Tyrone—McCann Bros., Tamlaught Road, Omagh.

Construction and completion of extra sleeping accommodation: R.U.C. Depot, Enniskillen—T. B. Moore, Bellanaleck, Enniskillen.

Adaptation of premises for office accommodation: Post Office, William Street, Cookstown—Benson Bros., Killymoon, Cookstown.

Erection of garage, repairs to existing, and work to alley: R.U.C. Station, Portadown—Samuel Graham and Son, Dromore Road, Hillsborough.

Formation of transformer and equipment rooms, etc: Ministry of Commerce Factories 3, 4 and 5, Castlereagh—Fraser and Co., Ltd., Hillfoot Street, Belfast, 4.

Construction m.s. sluice gate and operating gear for penweir 5: Lagan Canal, Lambeg—Harland and Wolff, Ltd., Queen's Island, Belfast, 3.

Construction and completion: Post Office, Ballymoney—J. and H. E. Doherty, Ltd., Bushmills Road, Coleraine.

**Ministry of Works.**—Contracts placed for week ended May 28:

Caernarvonshire: alterations, Post Office, Llanfairfechan—Watkin Jones and Son, Ltd., 16 Mount Street, Bangor.

Cambridgeshire: erection, Telephone Exchange, Cambridge—Rattee and Kett, Ltd., Station Road, Cambridge.

Cornwall: erection, Post Office Engineering Workshop, Russell Garage, Bodmin—Turner and Ellery, Mount Folley, Bodmin.

Devonshire: erection, Post Office Radio Station, Plymouth—Staverton Contractors, Ltd., Staverton Bridge Mill, Totnes; alterations to garage, Telephone Exchange, Elrington Street, Plymouth—John Garrett and Son, Ltd., Prince Rock, Plymouth.

Hampshire: fitting-up public office, New Post Office, High Street, Christchurch—

Burt and Vick, Ltd., Buffalo Works, Market Street, Poole, Dorset.

Herefordshire: internal decorations, Post Office Supplies Depot, Holmer Road, Hereford—Goodwin Greenway and Co., Barton Road, Hereford.

Lancashire: erection, Crown Building Wigan—John Turner and Sons (Preston), Ltd., William Henry Street, Preston.

London: alterations to canteen, Telephone Exchange, Farm Street, Mayfair, W.1—T. G. Waterman, Ltd., 187-9 Whitechapel Road, E.1; fixing of fire mains, Victoria Tower, Houses of Parliament, S.W.1—G. N. Haden and Sons, Ltd., 7-12 Tavistock Square, W.C.1; boundary railings and gates, Greenwich Observatory, Flamsteed House, S.E.10—Grundy Arnatt, Ltd., Somerset Works, Teddington, Middx.

Middlesex: water heating installation, Branch Post Office and Sorting Office, Potters Bar—Clark Hunt and Co., Ltd., 318-26, Southbury Road, Enfield.

Staffordshire: heating, Ministry of Supply Storage Depot, Featherstone—A. Dickens and Co. (Heating Engineers), Ltd., Wolverhampton Street, Dudley.

Yorkshire: installation of boiler plant, Safety in Mines Research Establishment, Broad Lane, Sheffield—J. B. Jackson and Partners, Ltd., 167-8 Millbank, London, S.W.1; alterations and extensions to existing Telephone Exchange, Manchester Road, Bradford—Walter G. Birch (Harrogate), Ltd., Cold Bath Road, Harrogate.

**Ministry of Works.**—Contracts placed for week ended June 4:

Berkshire: Home Office Store, Steventon—removal of chain link fencing—Baynes (Reading), Ltd., Fobney Sawmills, Berkeley Avenue, Reading.

Buckinghamshire: Post Office Stony Stratford—reconstruction—Betts and Faulkner, Ltd., 30a High Street, Stony Stratford.

Devonshire: Post Office Radio Station, Halwell—erection—Humphreys, Ltd., Market Road, Plympton.

Dumfriesshire: Hangar 3 shed, Lochabriggs Airfield, Dumfries—external painting—E. L. Bell, Lyceum Buildings, Dumfries.

Glamorgan: Inland Revenue Office and Ministry of Pensions and National Insurance, Water Street, Neath—alterations and extensions—Griffith Davies and Co., Ltd., Paxton Yard, Swansea.

Goucestershire: Post Office Radio Station,

Purdown, Bristol—erection—Stone and Co. (Bristol), Ltd., Redland Road, Bristol, 6.

Lanarkshire: Department of Scientific and Industrial Research, East Kilbride—d.c. power supplies—Lancashire Dynamo Nevelin, Ltd., Hurst Green, Oxted, Surrey.

London: Admiralty House, Whitehall, S.W.1—adaptations—W. J. Southgate, 65 Kenway Road, Earls Court, S.W.5; Tilbury Dock—erection of H.M. Customs and Excise office—J. Mowlem and Co., Ltd., 91 Ebury Bridge Road, S.W.1; joint office building, Northumberland House, W.C.1—installation of l.p.h.w. heating—Walter Cowen, Ltd., Souldern Road, W.14; joint office building, First Avenue House, High Holborn, W.C.1—conversion of boiler plant J. Jeffreys and Co., Ltd., St. George's House, 195-203 Waterloo Road, S.E.1; joint office buildings, Northumberland House, W.C.1—modernisation of electrical services—Read and Partners, Ltd., 28 Hatfields, Stamford Street, S.E.1.

Middlesex: National Physical Laboratory, Teddington: helium purifying plant—Ship-pam and Co., Ltd., Hawthorn Avenue, Hull; erection of pumping equipment, etc.—G. C. Pillinger and Co., Ltd., 216 Sutton Common Road, Sutton, Surrey; erection of automatic pumping equipment—W. C. Deane, Ltd., Romney Works, Amyanl Park Road, Twickenham, Middx.; erection of goods lift—Evans Lift, Ltd., Abbey Lane, Leicester.

Midlothian: Post Office site, Hopetoun Street, Edinburgh—provision of a hardstanding area—Limmer and Trinidad Lake Asphalt Co., Ltd., Trinidad House, Crewe Road North, Edinburgh, 5; Courts of Law, Parliament Square, Edinburgh—renew lead-work on Parliament Hall roof—Hugh Twaddle and Son, Ltd., 124 Buccleuch Street, Edinburgh, 1.

Surrey: joint office building, Zeeta Factory, Station Road, Barnes—installation of heating services—Norris Warming Co., Ltd., Burley House, Theobalds Road, W.C.1; Gatwick Airport: landing platform—Token Construction Co., Ltd., 68 Mount Street, Park Lane, W.1.

Yorkshire: Home Office Civil Defence Store, Pollington—external and internal painting—Singleton Decorators, Ltd., 12 Priory Lane, Doncaster; Saffey in Mines Research Establishment, Broad Lane, Sheffield—installation of boiler plant—J. B. Jackson and Partners, Ltd., 167-8 Millbank London, S.W.1.

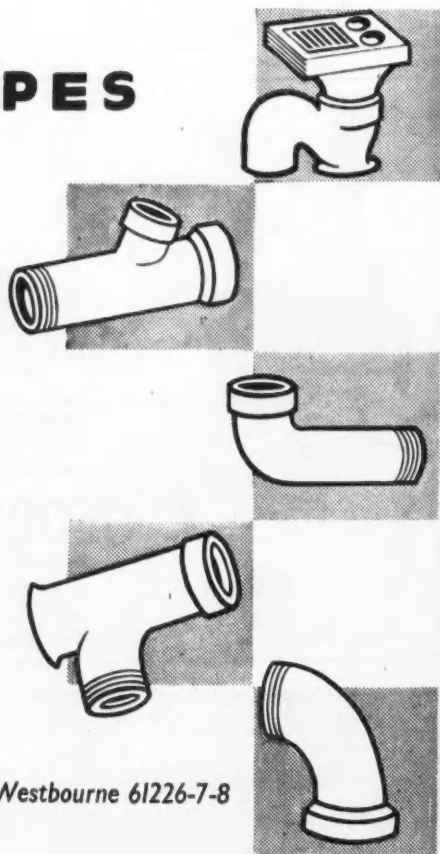
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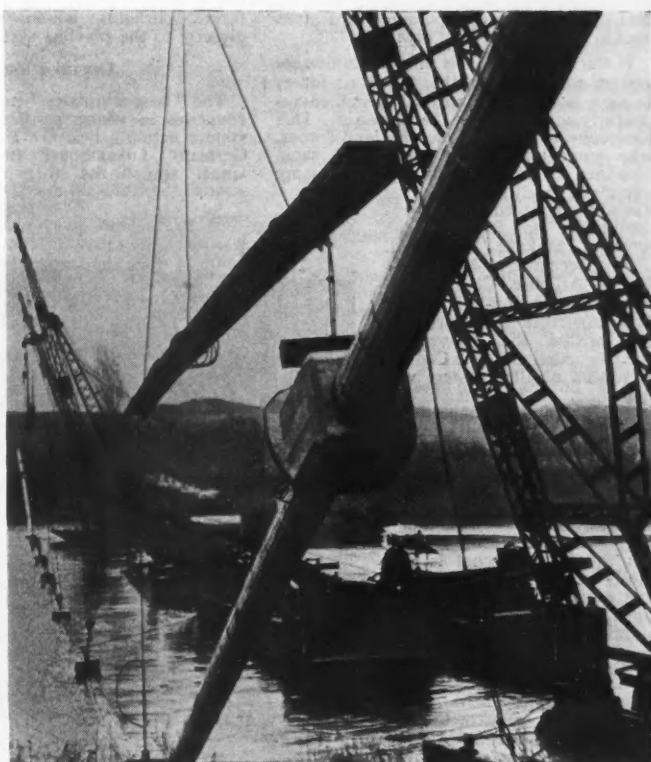


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ONE of the commonplaces of modern warfare is the dependence of all sections of the armed forces on adequate supplies of fuel, without which they are paralysed.

In the last war, the vulnerability of fuel-carrying vehicles and the delays imposed by the bombing of roads and approaches

to airfields and military formations made it clear that the classical means of transport were completely unable to meet all the fuel requirements of heavily mechanised forces. An alternative was needed which would ensure ready availability of adequate supplies of strategic fuel and the possibility of their continuous replenishment.

A great deal of study and discussion was naturally devoted to this problem by SHAPE and associated bodies and from all this there arose in 1952 a suggestion by the headquarters of Air Forces Central Europe that a number of storage tanks should be constructed in various NATO countries to hold reserve supplies for jet aircraft, which are voracious consumers of



Preparing trench for pipeline

fuel, and that wherever possible these tanks should be connected by pipelines.

If war broke out, this immensely flexible system would enable the Allied air forces to take both immediate and sustained retaliatory action against the aggressor. This idea appealed strongly to the land forces, who immediately asked to use the same pipelines to move motor fuel for army vehicles as well as the jet fuel already envisaged and correspondingly to increase the working tankage concerned.

In December, 1952, the North Atlantic Council approved a commonly financed "infrastructure" programme and within this framework the construction of the Central European pipeline system was launched. Although the initial emphasis had been placed on the fuel storage tanks themselves, this conception was gradually expanded, and it was a buried pipeline system as well as a storage system which took shape, with the result that, if not the longest, what is certainly the most complicated and extensive system of pipelines in the world is now substantially in operation and its construction largely completed.

#### The System

There now exists in Central Europe an integrated system of pipelines some three thousand miles long which holds tanks capable of storing 1,000,000 tons of fuel and which is linked directly to many ports, airfields, railways and canals.

The system has been designed to carry both jet fuel and 80 octane motor gasoline. It is already in use and supplying NATO land and air forces with much of their present requirements of these two fuels which are, however, substantially less than they would be if war broke out.

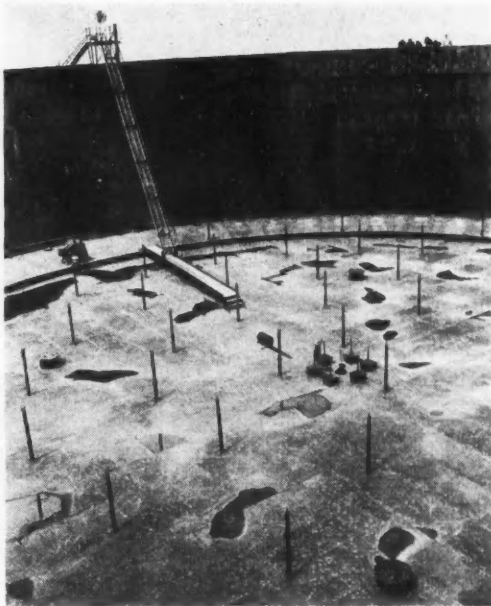
The fuels are sent in sequence under high pressure and although there is a limited degree of "contamination" around the section where one fuel follows hard upon the other, this is cleared at the receiving end.

The diameters of the pipes which are used run from 12in. down to 4in., this latter size serving the numerous Allied

forces' airfields which are connected directly to the pipeline system.

#### Organisation

The "host countries," that is to say, the countries in whose territory the pipeline system actually lies, are Belgium, France, Germany, Luxembourg and the Netherlands, whilst the three other nations



Storage tank under construction

making use of the system are Canada, the United Kingdom and the United States.

It is clear that such a complex network needs, if not an elaborate, at least an extremely efficient technical organisation to control its many functions. This takes the form of seven national pipeline divisions and a central co-ordinating controlling body.

There is one national division in the Netherlands, and one in Belgium; two are in Germany and three in France. These divisions are responsible for the day-to-day running of the system and employ some 1,000 people, among them highly qualified specialists.

Each national division is in touch by teleprinter with its neighbouring division, and also with every pump and filling station in its own area of control. It is also in constant touch with the controlling body, which is known as the Central Europe Operating Agency.

#### The Agency

This is a civilian organisation under the direction of a general manager, who is responsible jointly to two Central European bodies; one military, called the Central Europe Pipeline Office; and one political and financial, known as the Central Europe Pipeline Committee.

The Agency, which is situated near Versailles, ensures that the network runs at an integrated, uniform system. It co-ordinates the overall activities of the seven divisions in all their routine technical operations, in security and in nuclear defence, and is responsible for maintaining the most accurate accounting for fuel—in itself a very complex series of operations. In particular, the Agency plans, at least a month ahead, the international movement of fuel through the pipeline system to meet the needs of the eight user nations.

When completed, the general system of communications will be such that the Agency could give an order down to the level of an individual pump or fuel point operator in any of the host countries, whilst it is also completely informed at any given moment of the precise fuel situation in all the territories covered by the network. It maintains constant touch with military headquarters.

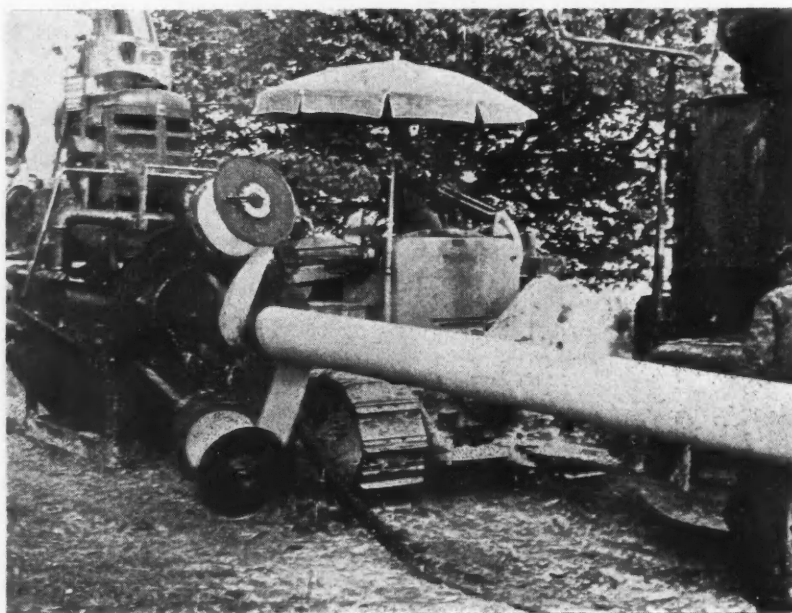
#### Financial

The cost of the Central European pipeline system, which is approximately \$200m. or £75m., has been provided by the infrastructure common financing procedure, in which each of the 15 NATO member nations contributes according to a set formula. After competitive tenders had been invited for the work, on an international basis, the actual construction was carried out chiefly, though not always, by contractors based on the territory in which the pipeline was to be built.

The Central European network is being run on a common annual budget which is prepared by the host country and submitted to the Central Operating Agency. The Agency, in turn, is responsible for streamlining these budgets and ensuring that all divisions work on uniform and efficient lines. The total annual budget is around \$5m. Since the Allied forces using the pipeline system pay for the services provided, the financial basis of the whole operation is on a businesslike footing.

In addition to the Central European pipeline system, there are separate NATO pipelines in Greece, Denmark, Italy, Norway and Turkey, but for reasons of geography and finance these are not interconnected and will not be linked to the Central European network. The Central European system itself undoubtedly provides a startling and interesting experiment in international co-operation for common defence, in that five host countries allow fuel bought by eight user countries to move across their frontiers unimpeded and free of tax and customs charges in time of peace as well as war.

*\*Reproduced from "NATO Letter" and published by courtesy of the North Atlantic Treaty Organisation Information Service. Photographs by Max Scheler.*



Anti-corrosion wrapping by machine

#### COST BREAK-DOWN OF RHODESIAN HOUSE

According to a Barclays Bank D.C.O. report, the Northern Rhodesia Africa Housing Board has calculated that 55 per cent. of the cost of a typical two-bedroom housing unit is spent on materials produced in the Federation, about 25 per cent. on labour, plant, overheads and profits and some 20 per cent. on imported materials.

# Talking of Safety

by

**"DRAGEE"**

ON the way back to the site office, John Fielding, the site agent, told me how his new stairs had nearly landed him in trouble with the factory inspector. It appeared that John and the inspector had been talking at the foot of the stairs, when a sudden swishing sound made them turn simultaneously—and jump for safety. It was Terry, the youngest of the apprentices, sliding down the handrail at high speed. John grabbed him as he arrived—more or less at the inspector's feet—and uttered a few carefully phrased observations regarding the boy's mental health, past history and future prospects. Terry listened politely, apologised, and walked away with considerable dignity.

"It was then," said John, "that I noticed a gaping rent in the seat of his pants. I imagine that I now have the full support of his mum."

From the subject of stairs we turned to ladders.

"Naturally, we still have to use quite a few ladders around the building," John said. "Not only for access, of course, but for men to stand on while they are working. We've used transportable stagings for midding jobs which wouldn't justify the erection of a scaffold, but sometimes even those are too cumbersome for bits of work which only require a few minutes. What is the legal position as regards working from ladders?"

"If you mean using a ladder by itself and not as part of, say, a ladder scaffold, there is no law against it, provided that certain precautions are taken. The first is to make sure that the ladder is standing on a firm footing. That means you mustn't put it on bricks or other loose packing. If the ground is uneven it is a good idea to bury the foot of the ladder, if you can. Where that's not possible, you can stand the foot on a small sack partly filled with sand."

"Dragee," who is a practising safety engineer, would welcome subjects for discussion in this column. All names of persons mentioned in these discussions are entirely fictitious. Questions of law are expressed as the author's personal opinions and are not claimed to be authoritative.—EDITOR.

"How about fixing the ladder? That's often a tricky business."

"I agree. And you must take into account the object of fixing it. The top of an unsecured ladder can move either sideways or outwards, and of the two alternatives the first is the more difficult to guard against. Outward movement is unlikely to occur if you stick to the four-to-one rule, that is, one foot out at the base for every four feet of vertical height. The first kind of overturning usually happens when the worker leans over sideways to do something, and there's very little except friction to resist the state of unbalance."

"Hence the fastening at the top?"

"Yes. If it can't be fixed properly, a man shouldn't be allowed to work on it. Nor should you let him work on a ladder if it would be unsafe for him to do so for any other reason. For instance, a man can't work safely with both hands unless he is using a special support."

"What kind of support?"

"Well, there are two or three types of ladder seats on the market. They are attached to the ladder in such a way that they form a sitting support for the user. As you can imagine, these things have to be selected with a good deal of care. Not only must they be soundly constructed, but they must never tend to damage the ladder in any way."

"Well, that seems to take care of the top of the ladder—what about the bottom end?"

"Let's go back to the Building Regulations," I said. "We are told that so far as practicable a ladder more than 10ft. in length must be secured so that it can't move from either the top or the bottom points of rest. If it can't be fixed at the top it should be secured at the base, and if everything is against you and you can't do that either, then you must station someone at the base of the ladder to prevent slipping."

"That seems to dodge the issue somewhat."

"It may appear to, but then you must remember that the regulations have to allow for all sorts of contingencies. Also, they are only intended to provide a minimum standard of safety. A ladder can nearly always be supported by side guys if there is no anchorage available."

"What about ladders less than 10ft. in length? Surely they can be dangerous sometimes?"

"I agree, but the regulations provide for that. The rules about fixing don't apply to a ladder less than 10ft. in length, if it is securely placed so as to prevent it from slipping or falling. Just try and get out of that one!"

"There are some further regulations governing the use of all ladders. Your ladders must be secured to prevent swaying, if necessary, and they must be supported properly on each upright—and that means equally supported. If you're in any doubt about the use of ladders as working places, I suggest you study our old friend Regulation 5 which says, roughly, that scaffolds must be provided for any work that cannot be done on the ground or from a ladder or other available means of support."

## RESEARCH ON ARCH DAM DESIGN

The Department of Scientific and Industrial Research are supporting several university groups who are gathering information on arch dam design. This is one of the scientific fields to which the Department increased their grants during 1959.

The work of the groups includes basic research into the stresses in dams, an essential to achieve the best design methods. It is also being supported by a group of civil engineering consultants and will be co-ordinated by a special committee of the Institution of Civil Engineers.

Computing techniques will be used by the investigators in association with scale model dams and co-ordinated results will be published. The investigators are: Professor S. C. Redshaw, Birmingham University; Miss L. Chitty, Imperial College, and Mr. C. Snell, University College, London; Professor D. N. de Gars Allen, Sheffield University; and Professor P. B. Morice and Dr. J. R. Ryzewski, both of Southampton University.

## £A2½M. MEDICAL CENTRE

Preliminary plans have been announced for a new medical centre at Melbourne University, to cost an estimated £A2½m. The centre will relieve overcrowded conditions and replace an obsolete building.

The vice-chancellor of the University, Sir George Paton, said the centre would accommodate the Departments of Bacteriology, Physiology, Anatomy and Pathology. He added that a new medical library would also be built.

## BOOK REVIEWS

**Reinforced Concrete Reservoirs and Tanks**, by W. S. Gray. Revised by G. P. Manning. Published by Concrete Publications, Ltd., London. Price 12s., by post 13s.—in Canada and U.S.A. \$2.80.

For the fourth edition, this well-known book has been extensively revised to include up-to-date methods of the design and construction of most types of open and covered reservoirs, tanks on the ground and below ground, swimming pools, and such industrial structures as gasholder tanks, tar tanks, and the like.

Special features include several charts and other data relating to the design of reinforced concrete works in accordance with the new British Standard Code of Practice No. 2007 (1960) for structures for the storage of water.

As in previous editions, Dr. Reissner's method of calculating the bending moments on the walls of cylindrical tanks is given in full. Numerous additional examples, with working drawings and illustrations showing the structures in the course of construction, are given.



"What are we waiting for?—Let's get it off and mend it!"

## Trade Section

## AUTOMATIC CONCRETE PLANT IS ACCURATE TO HALF PER CENT.

A READY-MIXED concrete plant with automatic operation incorporating the latest techniques for quality control, which with an eventual capacity of 1,500 cu. yd. a day will be among the largest such plants in the country, was opened last week at Nacovia Wharf, Fulham, for Greenham Ready Mixed Concrete, Ltd.

The water and cement content of any one batch is controlled to accuracies of  $\frac{1}{2}$  per cent. and the plant handles simultaneously, and at high speed, six varieties of aggregate and three of cement.

Materials are fed to the plant mainly by road but there are also facilities for rail and river transport. Cement, delivered in

pressurised vehicles, can be blown directly into any of the silo compartments, of which there are three with a total storage capacity of 120 tons (one 60-ton and two 30-ton compartments).

Sand and gravel are delivered in tipping trucks from pits in west Middlesex, and are tipped from a 7ft. ramp into one of four ground hoppers, each of which holds 50 cu. yd. The remotely controlled gates of these hoppers feed a belt conveyor. This transports the material 85ft. up, to one of six hoppers on the main plant, at the rate of 150 cu. yd. an hour.

The total hopper capacity on the plant is 300 cu. yd., made up of two 75 cu. yd. and four 37½ cu. yd. hoppers, grouped round the central cement silo. Each aggre-

gate hopper and each cement silo is fitted with high and low level indicators showing the state of the material quantities. The indicator's operate in a control cabin at the base of the plant. From the same point, one man can operate the conveyor, the gates to the ground hoppers, and the pivoted distributor at the top of the plant, which will chute the material from the conveyor belt to the correct hopper.

Water is stored in a 2,500-gallon tank on the ground, being pumped up to a 400-gallon tank on the plant.

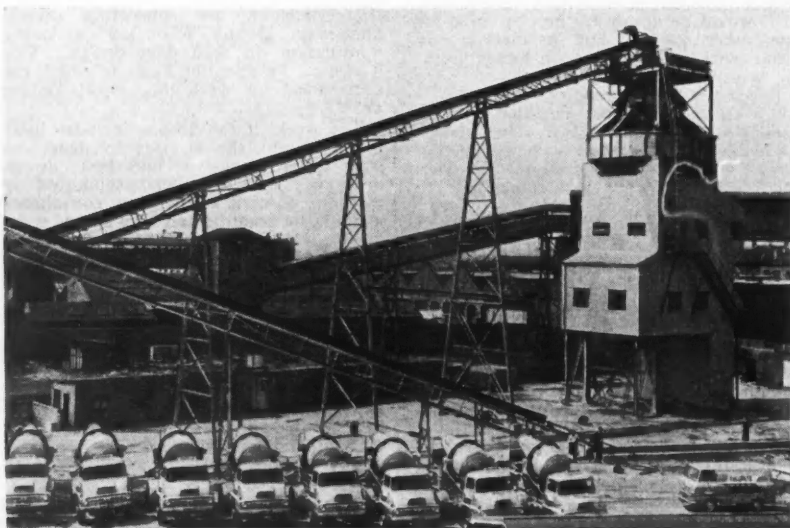
Weighing of materials is carried out in four hoppers. Two hoppers are each of 16,000lb. capacity (for sand and gravel); one is of 3,250lb. capacity (for cement) and one is of 2,000lb. capacity (for water). The aggregates are discharged through radial gates and the cement through semi-rotary valves, all operated by pneumatic rams.

The cement weigh-hopper is fitted with a pre-set automatic cut-out, and the sand weigh hopper is fitted with a moisture meter which in turn registers on the operator's control panel.

From the weigh-hoppers the materials are fed either into a 4 cu. yd. tilting drum mixer, or into a chute direct to a truck mixer, the drum mixer being driven electrically and tilted by pneumatic rams, either from the operator's floor or the mixing floor. The time of mixing can be controlled and discharge cannot be permitted until a given cycle is over. Provision is made for replacing the "dry leg" with a second 4 cu. yd. mixer at a later date. Concrete for the mixer is fed into a hopper and then into either a truck mixer or an agitator, or directly into a tipper lorry. Transport maintenance service includes a high-pressure water system for washing down the concrete vehicles.

Features of the new plant include the provision of a laboratory on site to ensure effective control and testing and a fleet of delivery vehicles in radio touch with the transport office, allowing the whereabouts of the concrete to be known to the customer at any time.

The plant was supplied and erected by Winget, Ltd.; the conveyor system supplied and erected by W. W. Brown and Partners, Ltd.; and the site construction works carried out by Messrs. Greenham, with the exception of the piling to the foundation of the plant which was carried out by Terresearch, Ltd. The whole of the scheme was completed within four months.



The 85ft. high plant, showing conveyors and delivery vehicles

## IRISH FIRM TO EXPORT P.V.C. PIPES

A COMPREHENSIVE range of hard p.v.c. pipes and fittings is being introduced to the British market by Wavin Pipes, Ltd., Cian Park, Drumcondra, Dublin.

The range includes service and distribution pipes, thick wall pipes for industrial use, water mains, and electrical conduits, claimed to combine resistance to chemical corrosion with strength, resilience and high pressure ratings.

Service and distribution pipes and fittings are suitable, state the manufacturers, for a working pressure of 130 p.s.i. with 300ft. head of water at 20 degrees C. Jointing is effected by means of a simple spigot and socket cemented joint, using either a double socket coupling or by forming one end of each pipe into a socket by the use of a gas torch and mandrel. The joints are made with a special cement which is not gap-filling and which fuses the adjacent surfaces to make a joint which is as strong as the pipe itself.

These service and distribution pipes are normally supplied in 15ft. lengths, in a range of seven nominal sizes from  $\frac{1}{2}$ in. to 1½in. A 15ft. length of 1½in. piping weighs 6.23lb.

The thickwall p.v.c. pipes have been designed to replace traditional steel pipe in cold water services and pipelines for industry.

The range of seven normal sizes ex-

tends from  $\frac{1}{2}$ in. to 2in. and the wall thickness in each case is such that a screw thread, in accordance with B.S.21, may be cut on the pipe. Hard p.v.c. screwed fittings, angle-seat type valves, and barrel nipples are available for use with the thick-wall pipes.

Hard p.v.c. water main varies in size from 2in. to 6in., with pressure capacities of from 87 p.s.i. to 173 p.s.i. Two hundred yards of such main, it is claimed, can be jointed on the side of the cutting, and then lifted and dropped into position.

## BUILT-UP ROOFING BOOKLET

"Built-up Roofing in Building Construction," is the title of a new illustrated booklet produced by The Felt Roofing Contractors Advisory Board.

The booklet describes bitumen felt roof coverings and their features, and contains chapters on design considerations, selection of roof covering materials and specifications, fixing and workmanship, and planning and site control. Several diagrams are included and a complete list of members and associate companies is given.

Designed primarily as a guide to architects and developers, the booklet is available from the offices of the Board, Victoria House, Southampton Row, London, W.C.1.

## £500,000 METAL SHEETING CONTRACT

A contract worth £500,000 has been awarded to The Cellactite Co., Ltd., Gravesend, Kent, for the side cladding of the new Richard, Thomas and Baldwin strip-mills, at Llanwern, near Newport, Mon.

The Gravesend firm will open a special processing plant near the site to cope with the production of between 250,000 and 300,000 sq. yd. of Cellactite. The first part of the 1,800-ton order is scheduled for this month and the sheeting operation is expected to start in August.

Richard, Thomas and Baldwins in conjunction with their consulting engineers, W. S. Atkins and Partners, have specified a different type of panel from the usual Cellactite corrugation. The new panel has been designed to relieve the monotony of a vast corrugated erection. Panels used on vertical constructions 80ft. to 140ft. high will be produced in varying lengths up to 12ft. by 1ft. 3in. They will be fixed by bolts to the steel frame of the building.

The manufacture of concrete slabs and kerbs, from the quarrying and crushing of the raw material through to the finished products, is the subject of "Paving the Way," a new 16 mm. colour film produced by Fielding and Platt, Ltd., Gloucester.

## Trade Section

## ALLIS-CHALMERS TRACTOLOADER BEING BUILT IN U.K.

**T**HE Allis-Chalmers TL-14 Tractol loader is now being built in this country. Known as the BTL-14D, it is in production at the Essendine plant of Allis-Chalmers Great Britain, Ltd., near Stamford, Lincolnshire.

Power reversing tractomatic transmission with a lever on the steering column to control both forward and reverse movement without stopping the machine to clutch and shift gears, is one of the features of this new machine. The lever hydraulically engages the two multiple disc, dry type clutches, one for forward

The new loader is equipped with a pneumatic coupling which provides a flexible, vibration-free connection between the engine flywheel and the torque convertor. The coupling consists of a small pneumatic tyre completely protected by a housing through which only the valve stem protrudes.

The BTL-14D is equipped with the A.E.C. AV.312 87-h.p. diesel engine. Shipping weight of the loader is approximately 14,900lb.

Various bucket sizes are available for the unit, ranging from 1 to 3 cu. yd.



The Tractol loader

ward travel, and the other for reverse.

Four speeds forward are provided to 22.3 m.p.h. and four reverse speeds to 29.3 m.p.h. Reverse speeds are approximately 30 per cent. faster than the forward speeds in the same gear.

Transmission, coupled with the BTL-14D large single-stage torque convertor having a 3 to 1 ratio, assures correct operating speeds. The transmission also has an automatic clutch cut-off which disengages the clutch when the brakes are applied. As an added safety factor for work on down-grade or when dozing over banks, the clutch cut-off can be disconnected by flipping a lever in the operator's compartment.

capacities. Standard bucket size is 1½ cu. yd.

Bucket tip-back at carrying height is 47 degrees, and there is up to 18,800lb. of breakout force at the cutting edge.

Maximum dumping clearance under the cutting edge is 8ft. 3in., under the hinge pin it is 10ft. 5in. at maximum dumping height, reach from the front of the tyres to the cutting edge is 2ft. 10in. Turning radius of the loader is 18ft. 11in. with the bucket in carry position.

Main distributors for the BTL-14D Tractol loader throughout the United Kingdom are Mackay Industrial Equipment, Ltd., Central Way, Feltham, Middx.

## BLACKWOOD HODGE'S TRADING DIFFICULTIES

**M**R. BERNARD SUNLEY, chairman of Blackwood Hodge, Ltd., attributes the group's decrease in total sales during 1959 largely to political factors.

He states in his annual review that in the home market the decision to restrict opencast coalmining created a serious situation, not only for opencast mining contractors, but also for equipment distributors and plant hire operators. Equipment which had been purchased to maintain coal production at the levels fixed by earlier Governmental policy announcements and, also, the organisations which had been built up for the maintenance and servicing of that equipment were, to a major extent, made redundant by this decision, which may politically have been wise but for which, economically, there could be no justification.

Additionally, the delay in carrying out the new major road development programme which this country so urgently needed had resulted in a large volume of road building equipment standing idle and in orders for new equipment being deferred.

In Australia the company's business was, until recently, severely affected by import restrictions. Similar problems existed, and were continuing to exist, in India. In Iraq and many parts of Africa political unrest had caused development schemes to be cancelled or postponed, so that, in certain territories, business was virtually at a standstill. In Canada the level of trading in 1959 was, on the whole, good, although it was, and continued to be, affected by credit restrictions and some cutting back of expenditure by the Dominion and Provincial Governments.

## JOINERY MANUFACTURERS' PLANS

The English Joinery Manufacturers Association plan to aid the smaller joinery firms, particularly those who specialise in purpose-made work. At a recent area meeting of the Association in Cambridge the Council was asked to look into the possibility of setting up a system whereby architects and builders seeking contracts with firms who are willing to undertake special "one-off" contracts can be put in touch with those E.J.M.A. members in any part of the country who would welcome this type of work.

A report on the recent discussions by the Association with Swedish Redwood importers, about the quality of artificially dried timber now coming into the country was given detailed consideration, and it was considered that by constant pressure some improvement might be maintained, although basically, members thought they were up against an economic problem. One view put forward was that over the next 15 years many manufacturers would be forced into using lamination.

## NEW COMPRESSOR TIPPING BODY

A new refuse collector body, designed for the more bulky but lighter density loads, was shown at the recent conference of the Institute of Public Cleansing.

Built by Glover, Webb and Liversidge, Ltd., the body is available in a range of sizes from 11/15yd. and 22/30yd., and can be fitted on Karrier Bantam and Karrier 6-ton chassis. It is of heavy gauge steel, galvanised to prevent corrosion, is equipped with a hydraulic compressing mechanism powered by two hydraulic rams fed from an Edbro pump driven from the gearbox power take-off. The compressing plate is controlled by arms so that it gives the refuse a forward and upward sweeping action which prevents it from falling back, and at the same time causes it to pile up and fill the body to the top.

## PORTABLE VIBRATING PLATFORM

For the production of the larger precast concrete units such as beams and pillars, Blending Machine Co., Ltd., Bond Street, Hockley, Birmingham, 19, have developed a portable vibrating platform or table with built-in facilities for lowering and raising.

Vibra-Lifta tables are operated in pairs, one at each end of the mould, to support the weight of the mould during the vibrational period. The frequency of vibration is about 3,000 v.p.m., derived from Blencut rotary electric vibrators beneath each table. The price of a 2ft. by 2ft. table complete with 50ft. of T.R.S. 4-core cable and step-down transformer is about £155.

Rhodes, Brydon and Youatt, Ltd., announce that their head office address is now Reddish Engineering Works, Stockport. Tel.: Heaton Moor 6211.

## SELF-PROPELLED STAGING

A mobile staging for maintenance work which can be propelled along without the operator climbing down from the platform was demonstrated in London recently by J. J. Johnston and Co., Ltd., 271 Uxbridge Road, London, W.12, agents to the manufacturers, Anderson Clyde (Midlands), Ltd., Chadderton, Manchester.

There are two models of the "Move-On" staging, one giving a maximum working height of 15ft-16ft. and the other adjustable in seven height positions up to a maximum of 54in. The staging, of welded and bolted steel channel, is propelled by a small rotating handle which works through a drive shaft to 90-degree bevel gears. The handle is fitted with a safety lock for when the staging is in the required position. Ackerman steering is fitted, the ball-bearing wheels having heavy-tread, cushioned-rubber tyres.

## Trade Section

## NEW COMPANIES

*The undermentioned particulars of new companies recently registered are taken from the daily register compiled by Jordan and Sons, Ltd., company registration agents, 116 Chancery Lane, London, W.C.2:—*

Huntsmans Road Contractors, Ltd., Longford, Naunton, Glos, road makers, surfacers, etc. £1,000. Directors: Maurice G. Hanks, Northfield, Naunton, Cheltenham; Roger R. Hanks, Hill Barn, Icomb, Stow-on-the-Wold, Cheltenham; Charles O. White, The Glen, Lower Dean, Northleach, Glos.

H. and F. Cowdery, Ltd., Dawley Works, Dawley Road, Hayes, Middx., builders. £5,000. Directors: Chas. H. Dowdery, 91 Kingston Hill, Kingston, Surrey; Barry C. Cowdery, 5 Bathurst Walk, Iver, Bucks.

M. and S. Construction (Manchester), Ltd., 20 Brazenose Street, Manchester. £100. Directors: John Murphy, 36 Store Street, Manchester, 1; Miah Sullivan, 107 Egerton Road North, Manchester, 16.

J. W. Doyle and Co. (Demolitions), Ltd., 137 Fenchurch Street, E.C.3 £1,250. Directors: John W. Doyle, 188 Plumstead High Street, S.E.18; Stanley N. Weston, The Little Orchard, North Foreland, Broadstairs, Kent.

H. and T. Bradley, Ltd., Holgate Street Sawmills, Great Harwood, Lancs., builders. £1,000. Directors: Harry Bradley, Lane Ends, Whalley Road, Great Harwood (governing director); Thomas Bradley, Wood View, Whalley Road, Great Harwood; Mrs. Hilda Bradley and Mrs. Joan Bradley.

Lakeland Construction (Arnside), Ltd., Black Dyke, Arnside, Westmorland, builders. £1,000. Directors: Cyril D. Marsh, 92 Beauford Road, Morecambe and Heysham; Donald Edwards, 94 Beauford Road, Morecambe and Heysham.

Pallier and Friend, Ltd., 533 Buxton Road, Great Moor, Stockport, builders. £100. Directors: John Pallier, 63 Dean Lane, Hazel Grove, Stockport; John Friend, 6 Ashbourne Road, Hazel Grove, Stockport.

Phillimore Development and Construction Co., Ltd., builders. £1,000. Directors to be appointed by subscribers. Subscribers: D. St. George, 12 Phillimore Terrace, W.8 (director); J. Waters, 58 Fraser Road, Perivale, Middx. Otterbourne Building Co., Ltd. £100. Directors: Alfred O. Matthews, Mathcombe, Kelvin Grove, Netley, Hants; Bernard E. Matthews, The Retreat, Winchester Road, Otterbourne, Hants.

Platton King (Developments), Ltd., 8 Hale Lane, N.W.7, builders. £100. Directors: Ernest Platton King, 8 Parkside, N.W.7; Ernest Platton King, Junr., Bolderside, Hendon Wood Lane, N.W.7.

Thorogood and Sons (Sussex), Ltd., 55 Bond Road, Surbiton, builders. £1,000. Directors to be appointed by subscribers. Subscribers: Reginald W. Thorogood, 203 Hook Road, Surbiton; Ernest H. Thorogood, 4 Kingsdown Road, Surbiton; Alec H. James, 263 Ewell Road, Surbiton (company directors).

Walker and Pemberton, Ltd., 9 Myrtle Place, Bingley, builders. £1,000. Directors: Joseph Pemberton and Mrs. Annie Pemberton, 1 Blarrett Street, Shipley; Donald M. Scott, 43 Vicarage Road, Shipley.

R. Edwins and Sons, Ltd., 69 Tilsworth Road, Stanbridge, Leighton Buzzard, Beds., builders. £1,000. Directors: Walter R. Edwins and Kitty Edwins, 69 Tilsworth Road, Stanbridge, Leighton Buzzard, Beds.

F. J. Ball and Son, Ltd., builders. £200. Directors: Fdk. J. Ball, Gladys Ball and Thomas M. Ball, all of 17 Rivercourt Road, London, W.6; Cyril A. Taylor, 77 Aspen Gardens, London, W.6.

Westminster Concrete Specialists, Ltd. £100. Directors: John E. Dayton, Burney Road, West Hamble, Dorking; Eric Ingersley 8 Webster Gardens, Ealing, W.5; Felix S. Chapman, address not stated.

A. and D. (Plant), Ltd., 30 Brown Street, Manchester, 2, plant hire specialists. £10,000. Directors: John A. Snape, 25 Chatsworth Road, Ellesmere Park, Eccles; Donald A. Snape, 20 Woodlands Road, Handforth; Mrs. Edith A. Snape and Mrs. Enid A. Snape.

B.G.W. Builders, Ltd., 20 St. James Place, Mangotsfield, Glos. £2,000. Directors: Henry R. Brown, 20 St. James Place, Mangotsfield, Glos.; Ivor A. Gould, 94 Lower Cheltenham Place, Bristol, 6; John W. Wedlock, 53 Springfield Road, Cotham, Bristol, 6.

Norman L. Ongley, Ltd., 166 Dyke Road, Brighton, builders and contractors. £100. Directors: Norman L. Ongley, 100 South Coast Road, Peacehaven, Sussex.

R. Shillabeer and Sons, Ltd., Stars Lane, Yeovil Som., builders. £25,000. Directors: Leslie Shillabeer, 69 Marsh Lane, Yeovil; Eric R. Shillabeer, 70 Stone Lane, Yeovil; Bertha A. Shillabeer and Pearl B. Shillabeer.

A. E. Mullins and Co., 48 Market Place, Reading, builders. £100. Permanent directors: Arthur E. Mullins and Phyllis M. Mullins, 10 Empress Road, Calcot, Reading.

Hare Construction, Ltd., Haeremai, Maudlem, Pyle, Glam., builders. £1,000. Directors: Frederick E. Hare, Victor T. Hare, and Mrs. Elsie M. Hare, Haeremai, Maudlem, Pyle, Glam.; Victor D. Hare, 45 South Road, Porthcawl.

Norcrete, Ltd., 109 North Lane, Aldershot, bricks, etc. £500. Directors: Jack W. F. Jackson, 109 North Lane, Aldershot, and Eric Southern, 117 North Lane, Aldershot.

R. B. Carey, Ltd., 13 Grimstone Terrace, Houndiscombe Road, Plymouth, Devon, public works contractors. £1,000. Directors: Robert B. Carey and Mrs. Elizabeth A. Carey, The Old Forge, Harborton, Tames.

L. F. Pilcher, Ltd., builders. £100. Permanent directors: Leonard F. Pilcher and Dorothy E. D. S. Pilcher, 1 Bexley Road, S.E.9.

Traynor and Mills Co., Ltd., builders. £4,000. Directors: Michael F. Traynor, 6 St. Peters Road, Basingstoke; Leslie Mills, 4 Church Meadow, Bradley, Alresford.

Walker-Cotton, Ltd., 35 Monks Close, Lancing, Sussex, builders. £500. Directors: John Walker, 35 Monks Close, Lancing, Sussex; Horace E. W. Cotton, 27 Cecil Road, Lancing, Sussex.

G. R. Nixey (Contracts), Ltd., Station Road, Wheatley, Oxon, public works contractors. £100. Directors: Geoffrey R. Nixey, Station Road, Wheatley, Oxon; Adam C. Paterson, Jericho House, Walton Street, Oxford.

Philip Snow (Builders), Ltd. £2,300. Directors: Philip J. Snow and Mary A. Snow, The Old House, Sheriffhales, Salop; Margaret Sergeants address not stated.

J. and C. Hull, Ltd., builders. £2,000. Directors: Joseph Hull, 47 Gale Lane, Acomb; Christopher J. Hull, Twinbridge House, Moor Monkton, York.

Bourne Partners, Ltd., builders. £500. Directors: Reginald A. Troke, 3 Oakley Road, Wimborne, Dorset; Herbert Bottomley, 8 Kent Road, Parkstone, Poole, Dorset.

George Bayley (Builder), Ltd. £2,000. Directors: George Bayley and Mrs. Nellie Bayley, 9 Longfield Road, Shaw.

G. S. Garey and Sons (Cheshunt), Ltd., Blind Mans Lane, Cheshunt, Herts, builders. £3,000. Directors: John L. Garey and Eileen W. Garey, 33 Sydney Road, Enfield, Middx.

R.G.T. Building Contractors, Ltd., 5 Knighton Chambers, Aldwick Road, Bognor Regis, Sussex. £100. Directors: Robert G. P. Tullett and Mrs. Josephine M. F. Tullett, both of 48 Sherwood Road, Bognor Regis.

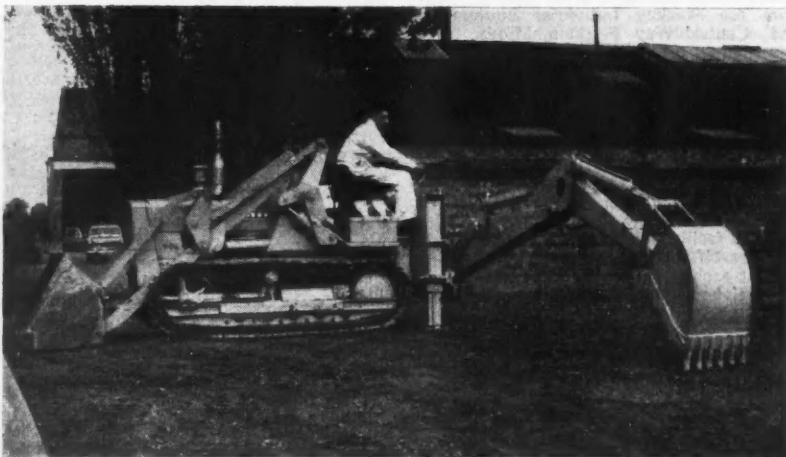
Teecon Construction Co., Ltd., public works contractors. £200. Directors: Derrick Flint, Tremaneth, Spring Hill Lane, Lower Penn; Laurence V. Hulse, The Crest, Ounsdale Road, Womborne, Staffs.; Leonard J. Edge, 10 Milburn Road, Gillingham, Kent.

W. G. White and Son (Builders), Ltd., 58 South Street, Bridport, Dorset. £3,000. Directors: Wilfred G. White, Chellowdene, Hill View Estate, North Allington, Bridport, and Gilbert W. White, The White House, Crock Lane, Bridport.

Cofield (Contractors), Ltd., 9 Colehill, Tamworth. £2,000. Directors: Ernest Clarke, 33 Penns Lane, Sutton Coldfield; Peter J. Carr and Margaret J. Carr, both of 85 Fern Road, Erdington, Birmingham.

G.R.S. (Contractors), Ltd., Danes Inn House, 265 Strand, W.C.2, public works contractors. £100. Directors: Richard E. Smith and Mrs. Eliza Smith, 53 Buckingham Avenue, Whetstone, N.20; Gerald R. Smith 80 Milton Park, Highgate, N.6.

Pictured on the right is the new Foreloda now being produced by H. Cameron Gardner, Ltd., Woodley Aerodrome, Reading. It is made for fitment to the Roadless four-wheel drive tractor manufactured by Roadless Traction, Ltd., Hounslow, Middx., and will fit the standard tractor without alteration. Prices are as follows: Main unit, £143; G.P. bucket, £22 10s.; industrial bucket, £34; dozer blade, £23; craning jib, £15 10s.



The John Deere-Lanz 831 Crawler Loader fitted with the 51 Backhoe was among the items of John Deere-Lanz agricultural and industrial equipment exhibited by Fred Myers, Ltd., Windsor at the Essex Agricultural Show held recently at Chelmsford

## Trade Section

## UNUSUAL APPLICATION OF EARTH BORER ON TIDAL RIVER WALL

A STANDARD earth borer, designed for the sinking of poles, post holes, foundations, etc., is being used by the Essex River Board to bore short raking piles at an angle of 45 degrees.

The scheme is taking place on a tidal river wall in Essex, and consists of the provision of bored piles, 12in. in diameter and up to 8ft. in depth, spaced at 10ft. centres and intended to prevent movement by wave action of an L-shaped concrete parapet wall.

Used in conjunction with an International BTD 6 crawler tractor, the earth borer operates on top of a clay sea wall. Simple modifications were carried out by the River Board's plant department to the rear linkage connecting the borer to the tractor, and this allows the borer to work at an angle of 45 degrees in driving the angled holes for the reinforcement and concrete. Without such an arrangement, the alternative would probably have been to hand-auger the holes.

The earth borer being used is a standard piece of equipment for direct mounting on to the three-point hydraulic linkage of the heavier agricultural tractors, downward

pressure being applied to the rotating augur by the operation of a hand lever. It is manufactured by Transplanters (Robot), Ltd., Guildford Road, St. Albans, Herts.



The linkage between borer and tractor



General view of the borer operating at an angle

## TURNERS ASBESTOS WORKS VISIT

A VISIT to their Widnes factory was recently arranged by Turners Asbestos Cement Co., Ltd., the company within the Turner and Newall organisation responsible for the manufacture of asbestos-cement building products.

The visitors toured the factory, which now covers about 45 acres, almost half of which area is roofed over to provide manufacturing, maturing and stocking accommodation. During the tour, the moulding, pipe and roofing divisions were visited, and different stages in the manufacture of a great variety of asbestos-cement products were inspected.

A feature of the works seen by the visitors was the recently installed handling equipment for cement. Pressurised rail containers are used to fill and replenish the six storage silos, each of which has a

capacity of 500 tons. This equipment has reduced costs, improved working conditions and has made possible a degree of process control unattainable by the old hand feeding methods.

The guests were welcomed by the chairman of the company, Mr. K. Neve.

### A.E.C. "SHOP WINDOW"

The Diesel Engine Division of A.E.C., Ltd., recently staged a two-day exhibition of its products and their applications at the company's works at Southall, Middlesex.

The display attracted a large gathering of users of A.E.C. diesel engines and vehicles from home and abroad, and Lord Brabazon, chairman of Associated Commercial Vehicles, Ltd., toured the exhibits.

## AUSTIN AND MORRIS LIGHT VANS

NEW Austin and Morris 5cwt. vans announced by the British Motor Corporation Ltd., embody the designs of the Austin Seven and Morris Mini-Minor "Twins" and provide 46½ cu. ft. of load capacity behind the driver. The retail price is £360.

Fuel consumption figures are given as 55.5 m.p.g. and 50 m.p.g. at a steady 30 m.p.h. and 40 m.p.h. respectively on a fully laden vehicle.

The 850 c.c. o.h.v. engine has been developed from the earlier Austin A30, A35 and Morris Minor models. With four cylinders, it is of relatively large size for this 5cwt. van and high gearing through the front wheel drive ensures an economical road performance. Chassis and suspension design are similar to the Austin Seven and Mini-Minor cars, but the wheelbase is 4in. longer, so that with the increased rear overhang the van is 11ft. long.

At the rear, wide double doors are fitted with specially designed automatic check rods to prevent the doors from opening beyond the line of the body.

### LUBRICATING PLANT ON SITE

To eliminate the traffic of earthmoving plant between the work-face and the servicing depot, Vigzol Oil Co., Ltd., Greenwich, London, S.E.10, have brought out a trailer-mounted unit for carrying out lubrication on site.

This mobile depot carries an oil load of three tons or 750 gallons. Five different grades of oil are supplied by the unit including gear, engine and hydraulic oils as well as grease.

The basic equipment, which can be drawn by tractor or Land-Rover, comprises tanks, pumps, hoses and containers for retaining drawn-off sump oil. An estimated saving of 12 hours per week per earthmoving machine is claimed with the use of the unit.

### ASBESTOLUX COLUMN CLADDING

A new method of cladding steel columns and beams has been developed by Cape Building Products, Ltd., Uxbridge, Middx., using a special grade of their Asbestolux asbestos insulation board.

Board of ½in. or 1in. size, is cut on site to fit the steel section, allowing ¼in. for horizontal cover fillets. The casing is fitted together and edge-screwed using 2¼in. 8P.K. or woodscrews. At cross joints ¼in. cover fillets are inserted to prevent flame penetration at these points. The screw holes can be filled and rubbed down, leaving the surface ready for immediate decoration after priming.

## ROADS RECONSTRUCTION (1934), LTD.

At an Extraordinary General Meeting held on June 8, 1960, a Resolution was passed increasing the capital of Roads Reconstruction (1934), Ltd., to £1,487,700 by the creation of 2,301,600 Ordinary Shares of 2s. 6d. each, for the purpose of acquiring the whole of the issued share capitals of The Drybrook Quarries, Ltd., and Batts Combe Quarry, Ltd., subsidiaries of Thomas Roberts (Westminster), Ltd., in exchange for shares of Roads Reconstruction (1934), Ltd.

General Sir James Steele, chairman of Roads Reconstruction (1934), Ltd., has retired from the Board, and Mr. John Stuart Roberts, managing director of Thomas Roberts (Westminster), Ltd., has been appointed chairman in his place.

Mr. I. S. Watson, joint managing director of Thomas Roberts (Westminster), Ltd., has been appointed deputy chairman, and Mr. W. W. Munns, O.B.E., and Mr. E. F. Tattersall, F.C.A., have also been appointed to the Board.



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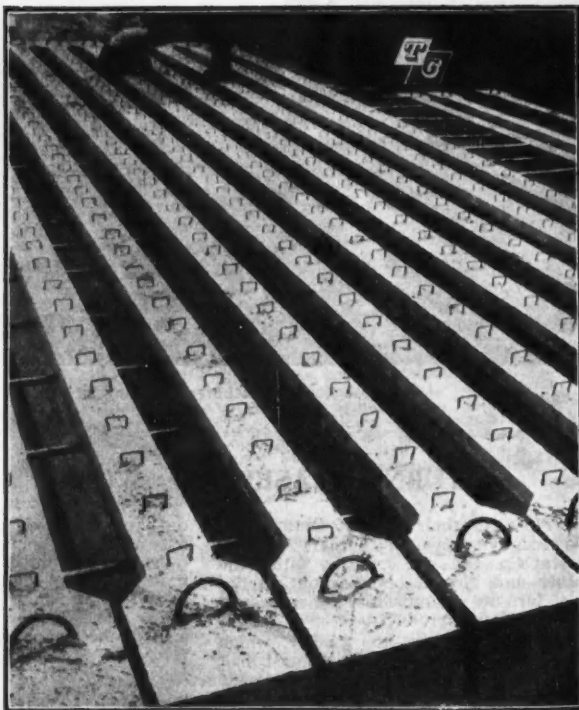
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Photograph reproduced by courtesy of S. Mehew, Esq., O.B.E., B.Sc., A.M.Inst.C.E., A.M.T.P.I., County Surveyor of Derbyshire, showing 40'0" beams prestressed, pretensioned, laid for the new bridge on the A.50 at Fostons, Derbyshire.

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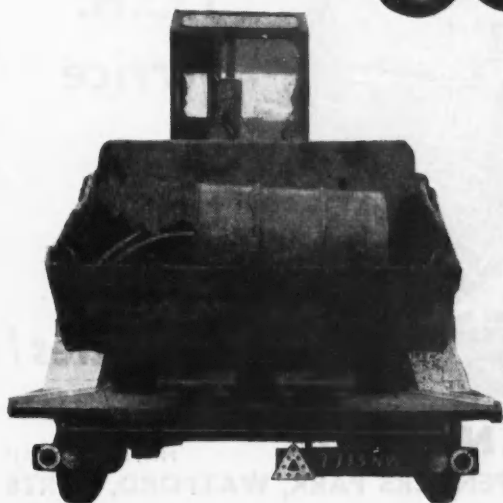
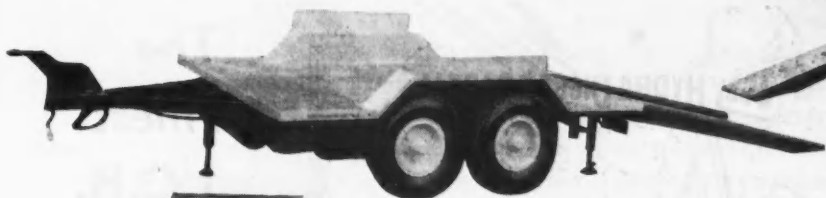
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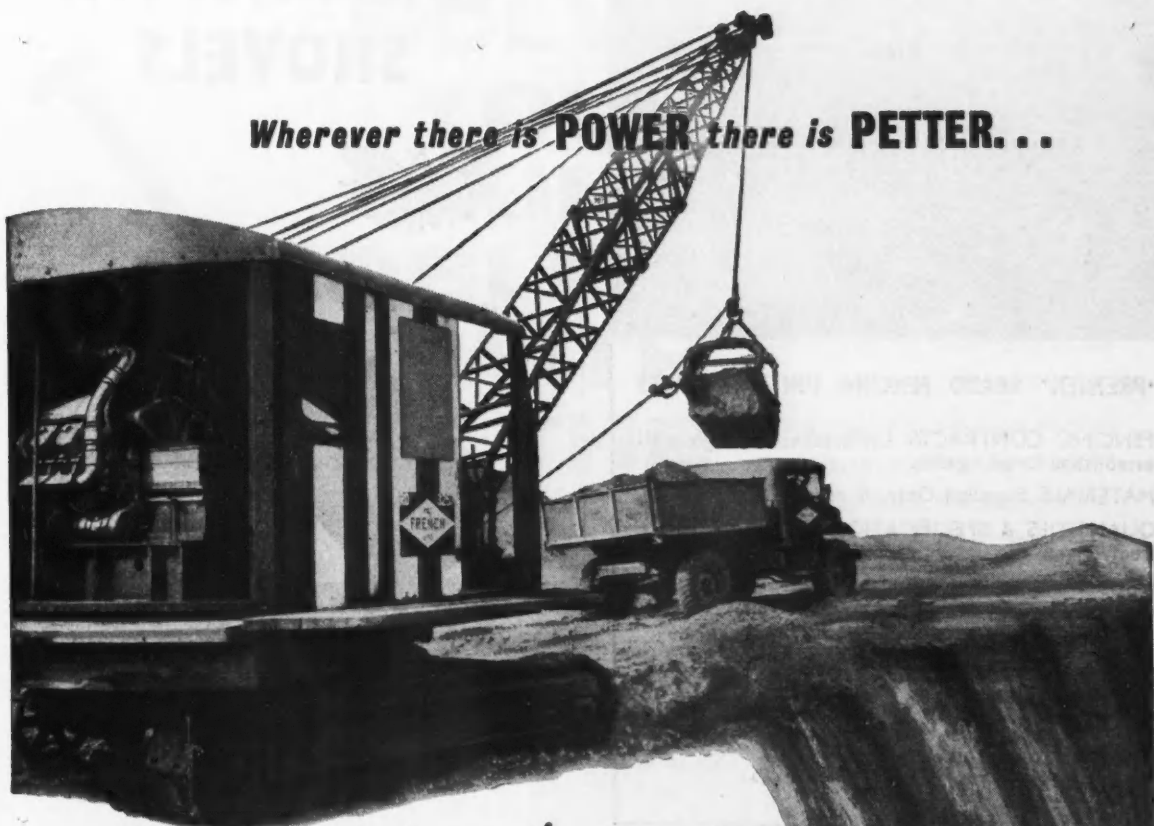
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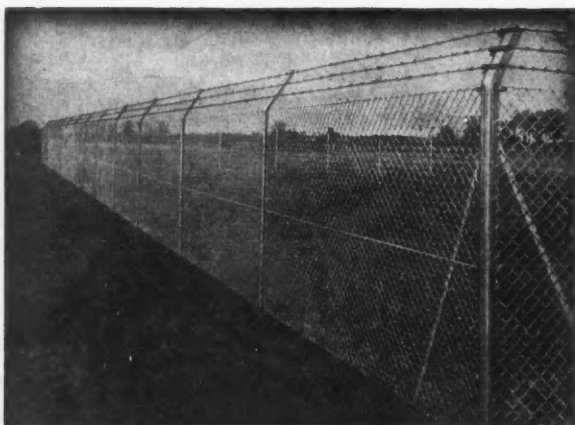
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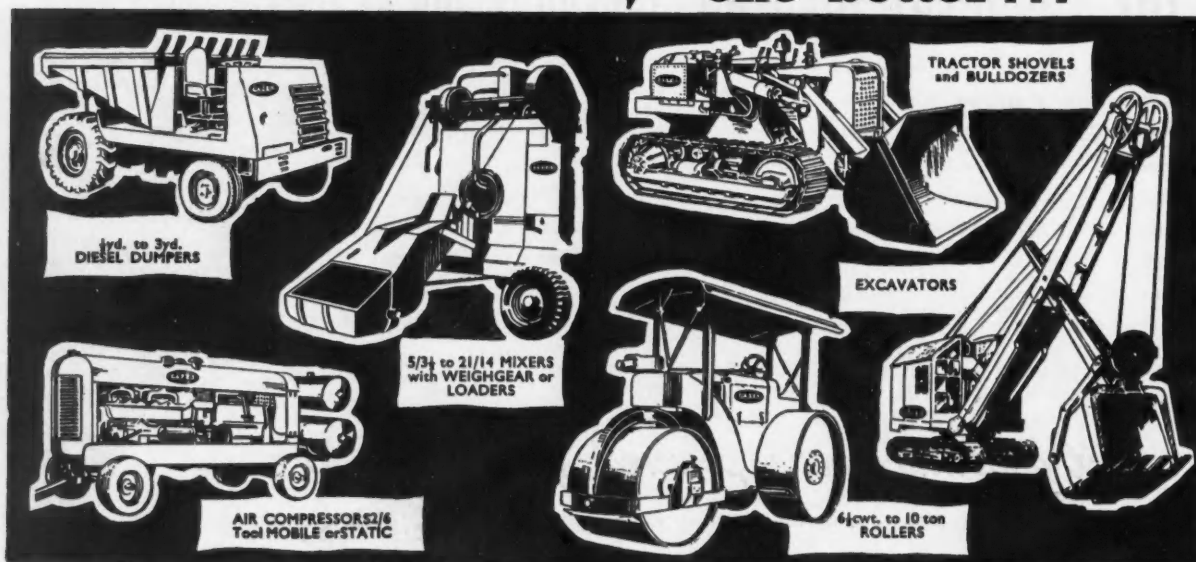
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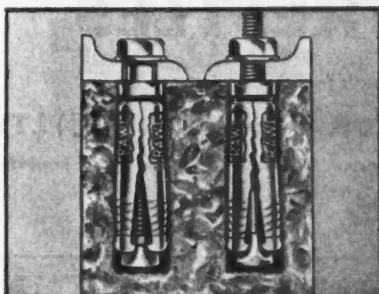
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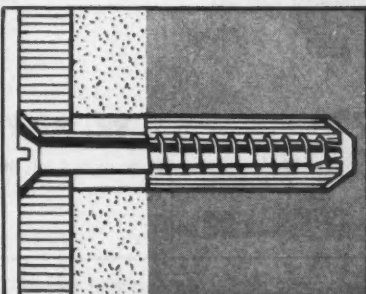
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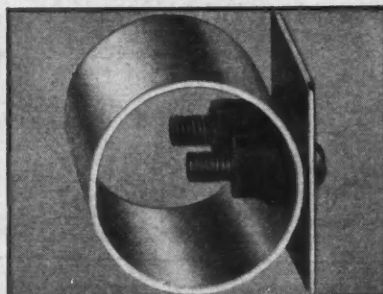
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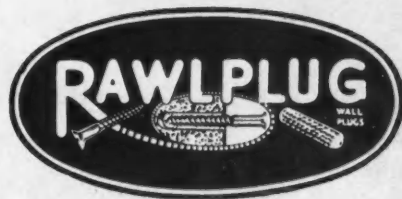


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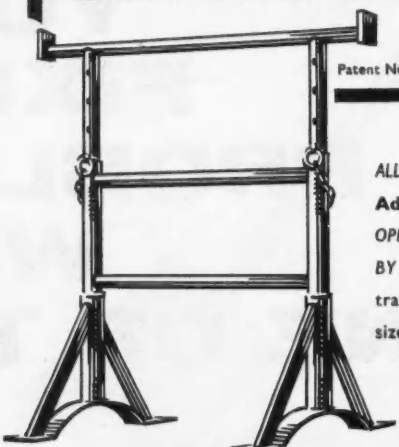
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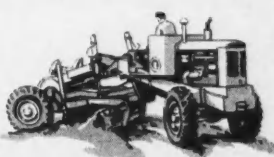
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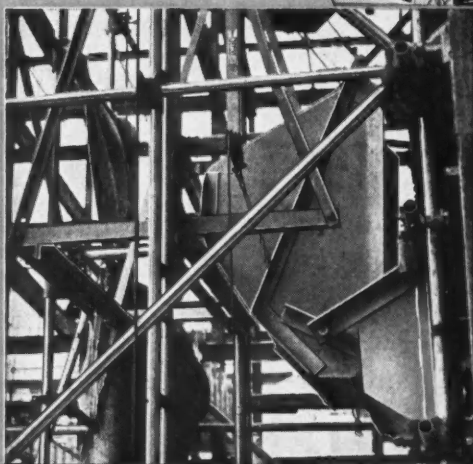
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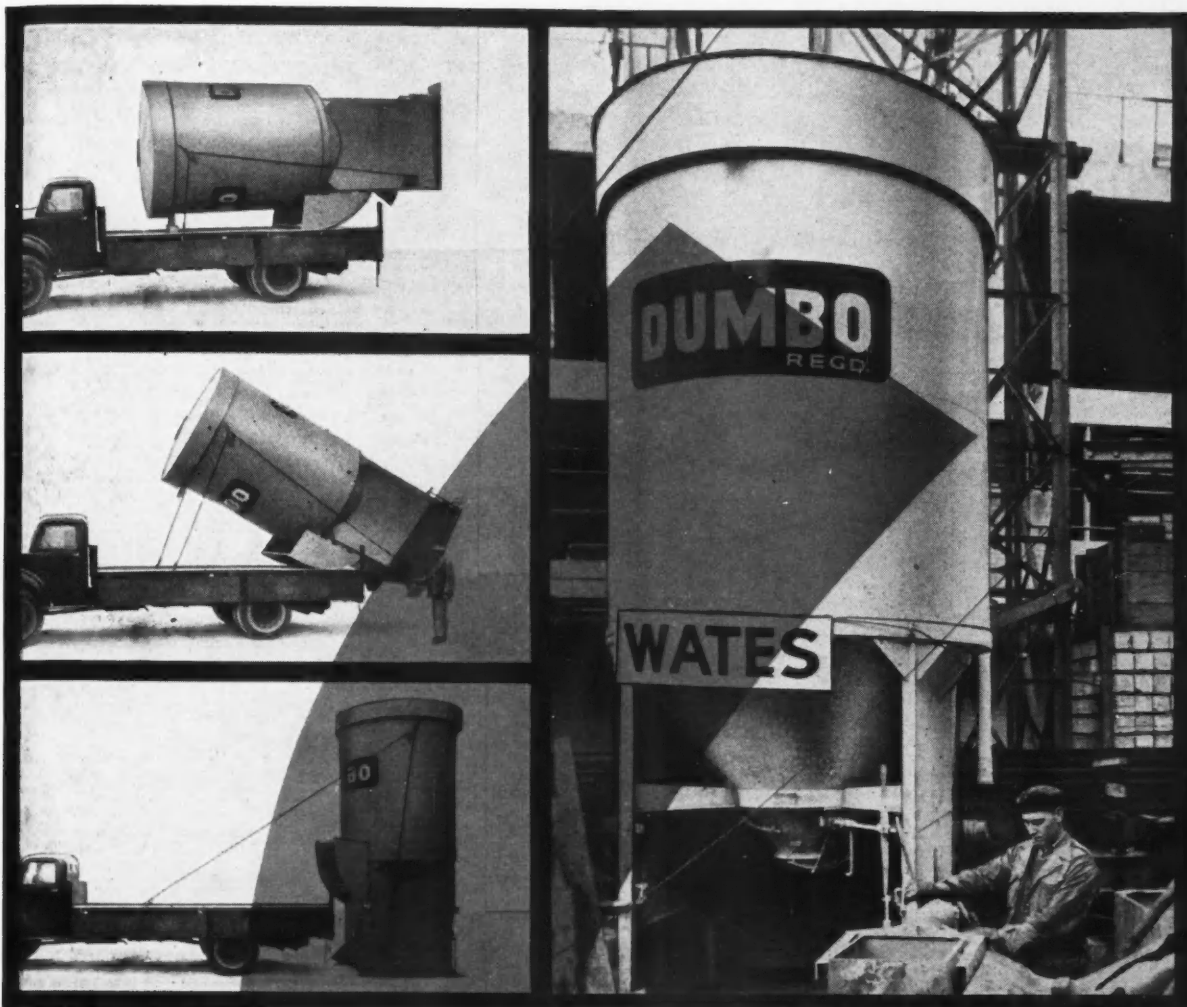


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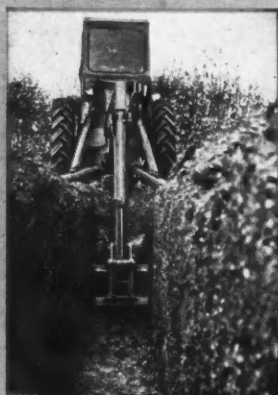
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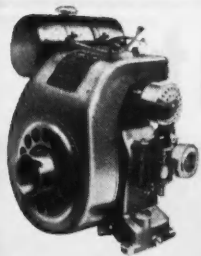
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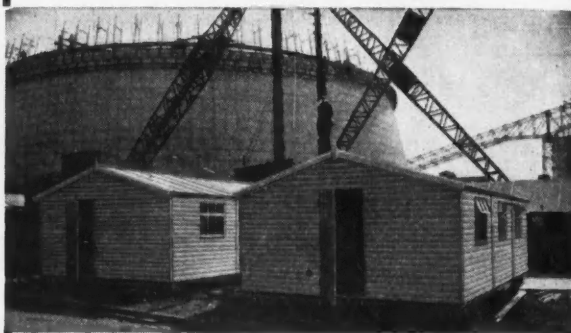
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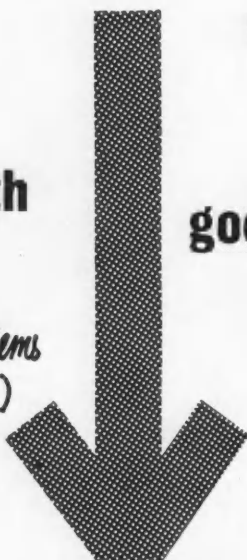
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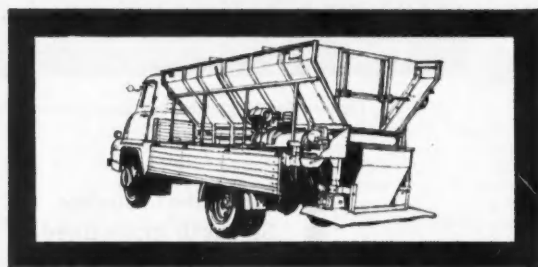


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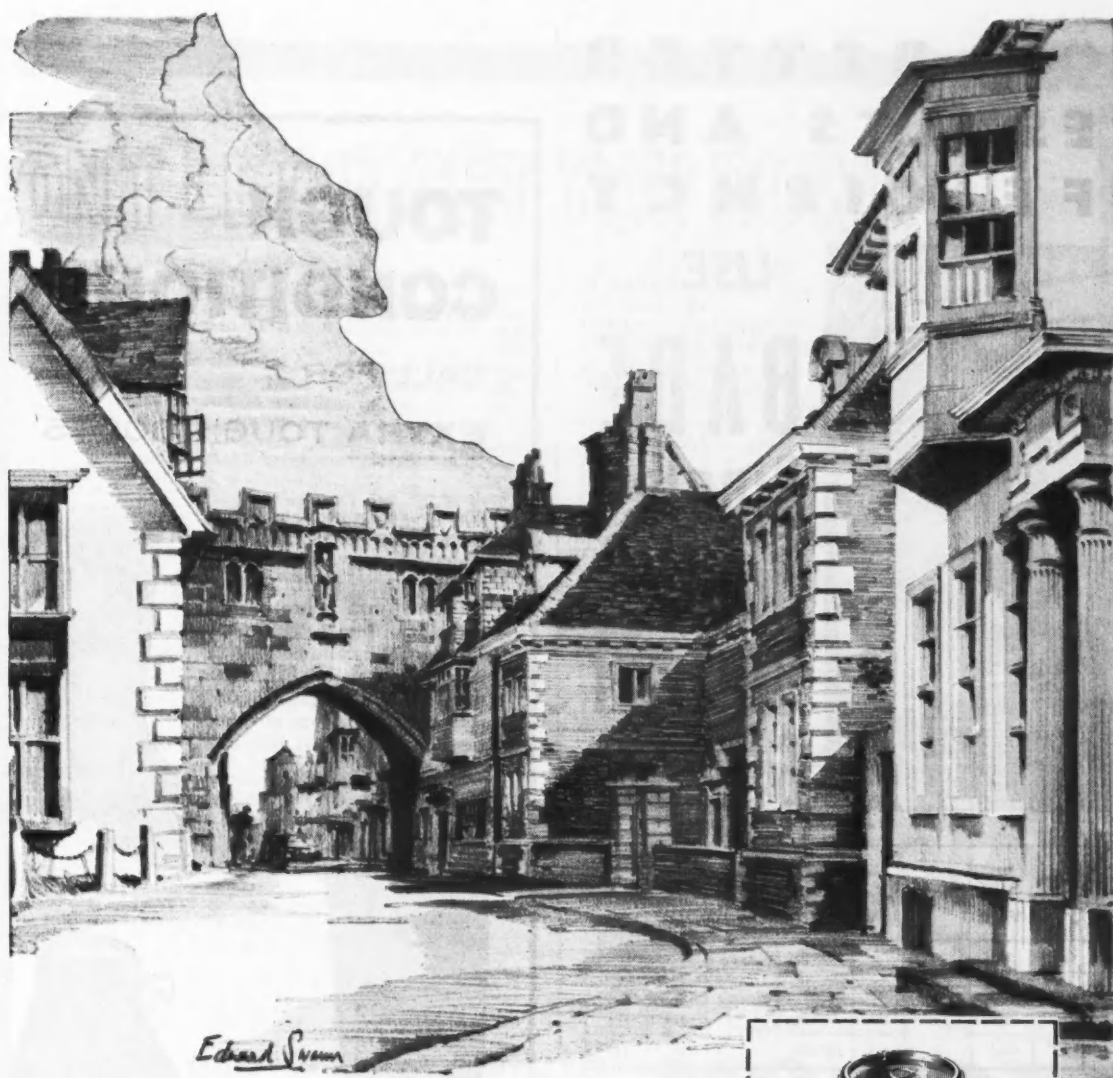
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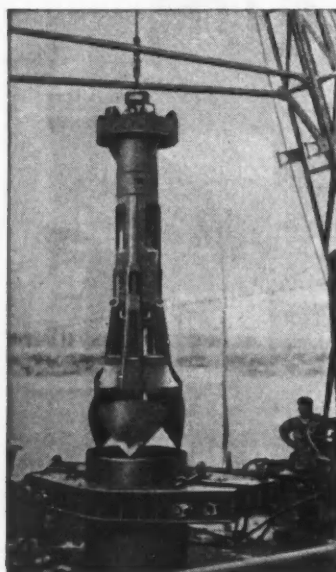


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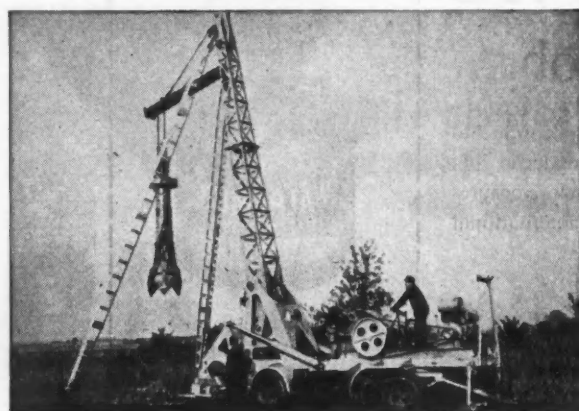
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E-32-2	14 1/2"	17 1/2"	3	-	1720 lbs.	187 lbs.	16 1/2"	15 1/2"
	16 1/2"	20 1/2"		-	1764 lbs.		18 1/2"	17 1/2"
	20 1/2"	25 1/2"		18 1/2"	1841 lbs.		22 1/2"	21 1/2"
	24 1/2"	29 1/2"		21 1/2"	1962 lbs.		26"	24 1/2"
E-43-2	28 1/2"	33 1/2"	3	24 1/2"	2866 lbs.	243 lbs.	30 1/2"	29 1/2"
	38 1/2"	43 1/2"		32 1/2"	3307 lbs.		39 1/2"	38 1/2"
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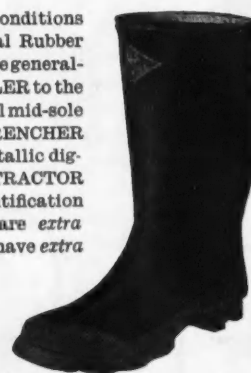
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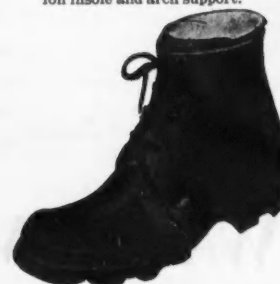
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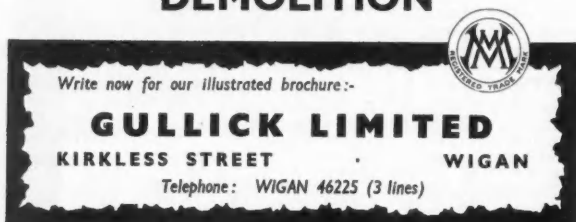
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(Continued from page 1466)

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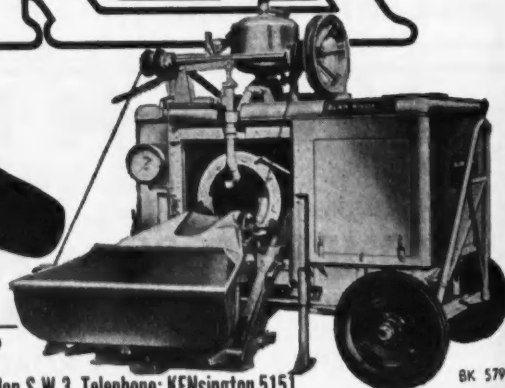
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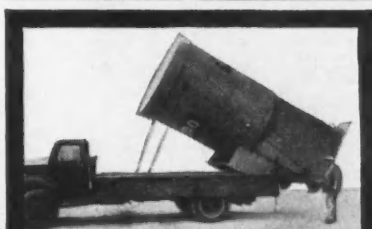
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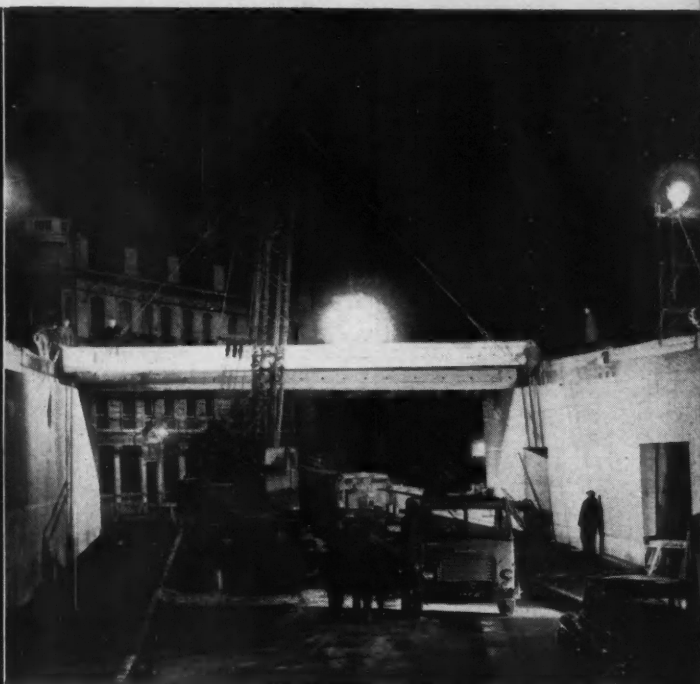
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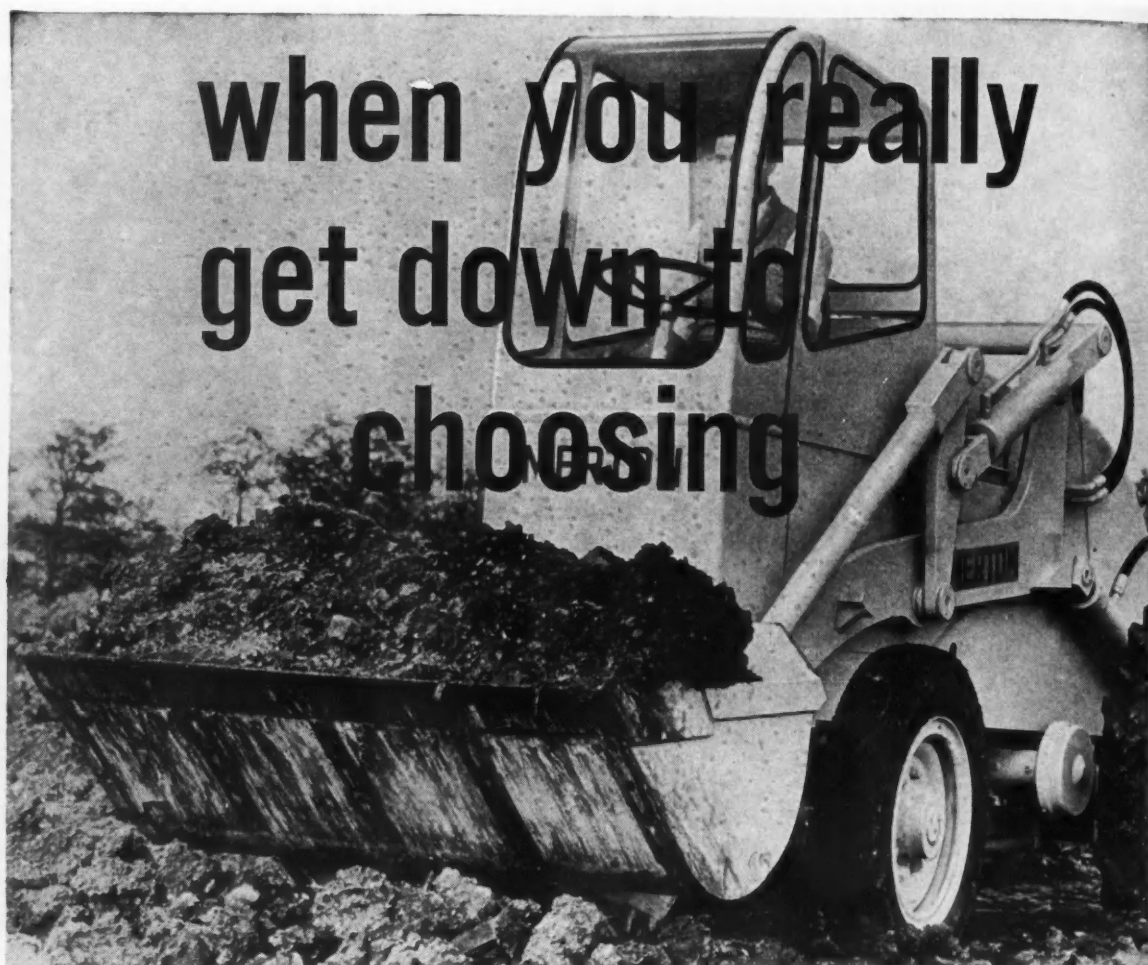


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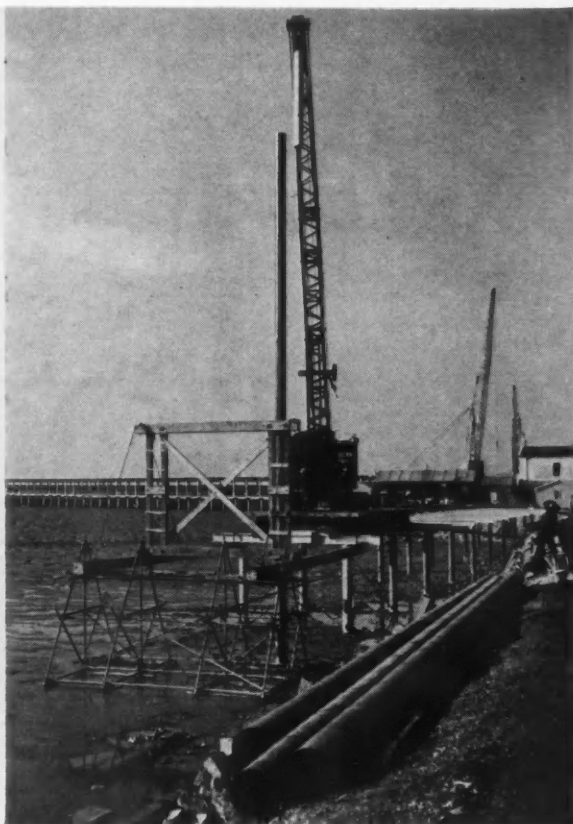
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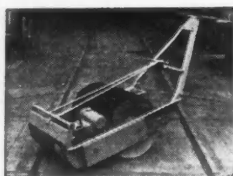


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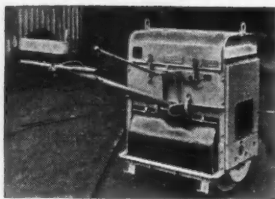
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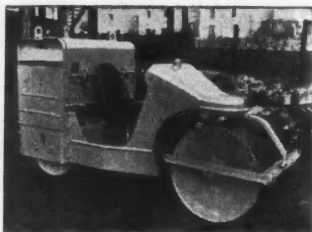
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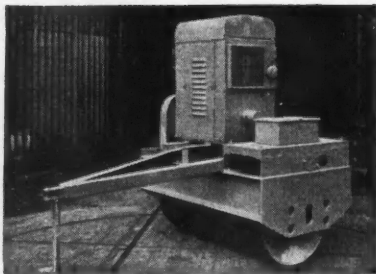
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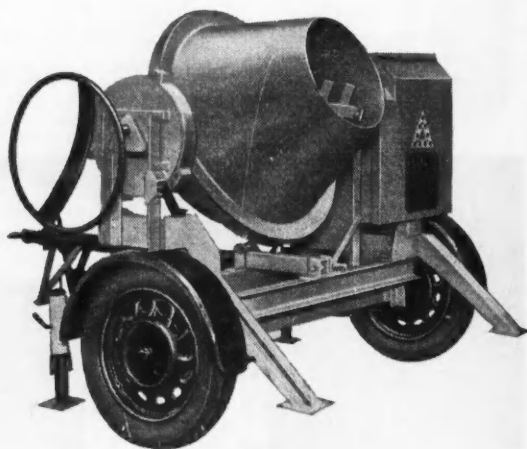
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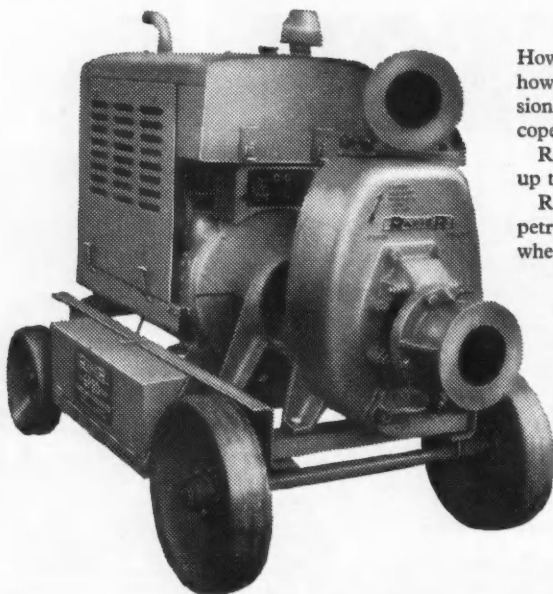
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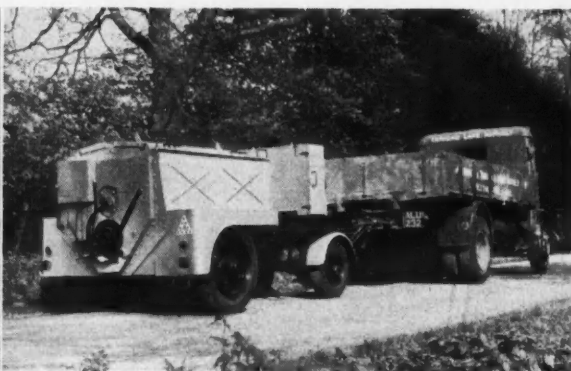
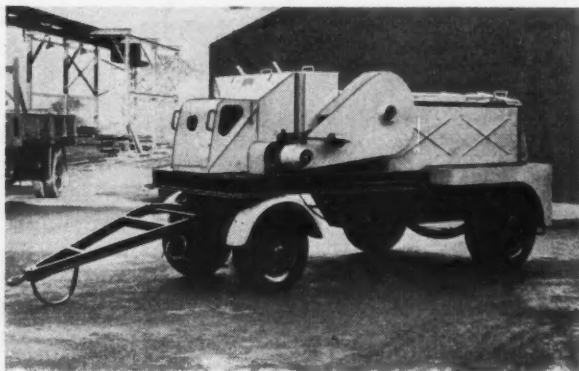
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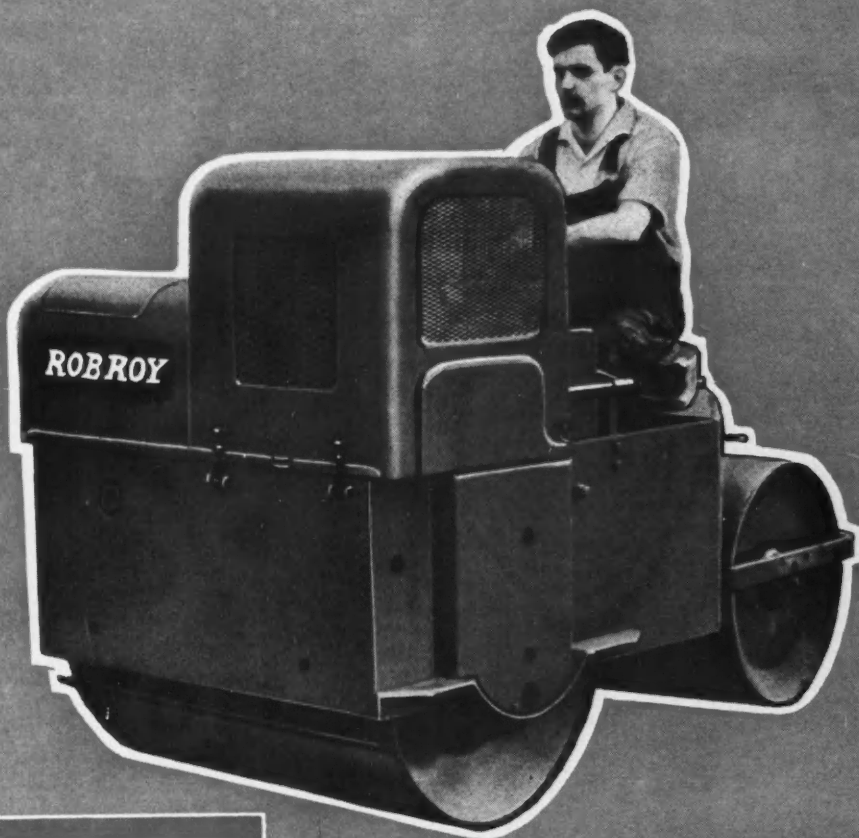
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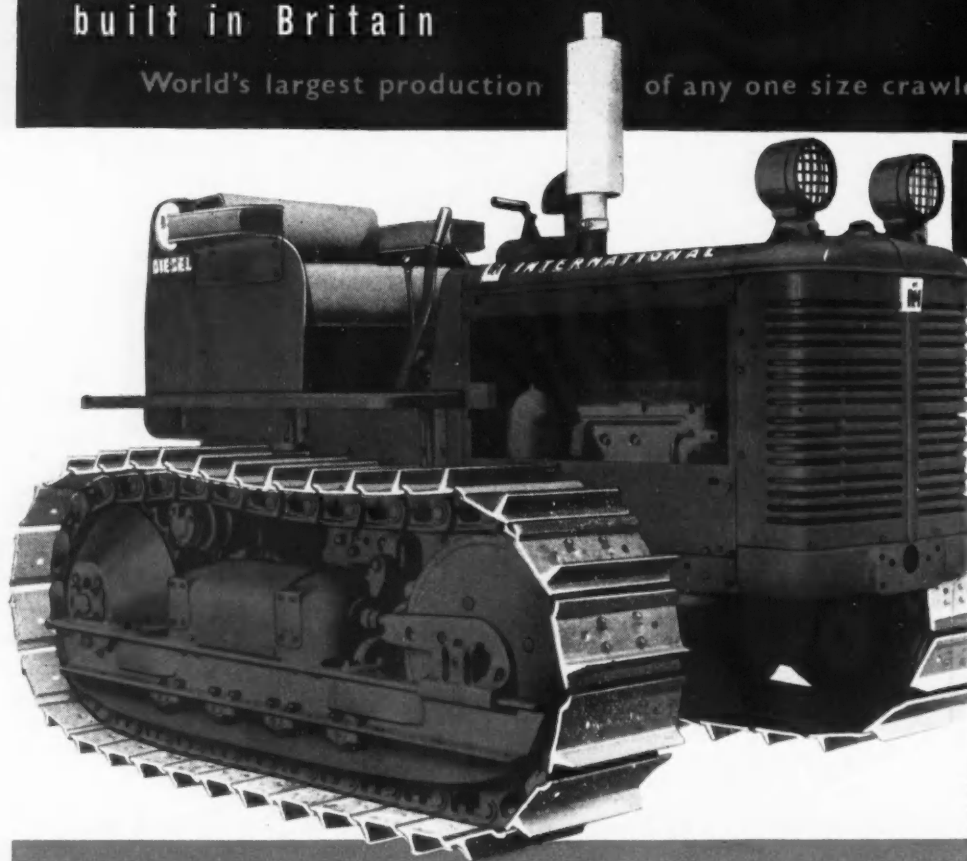
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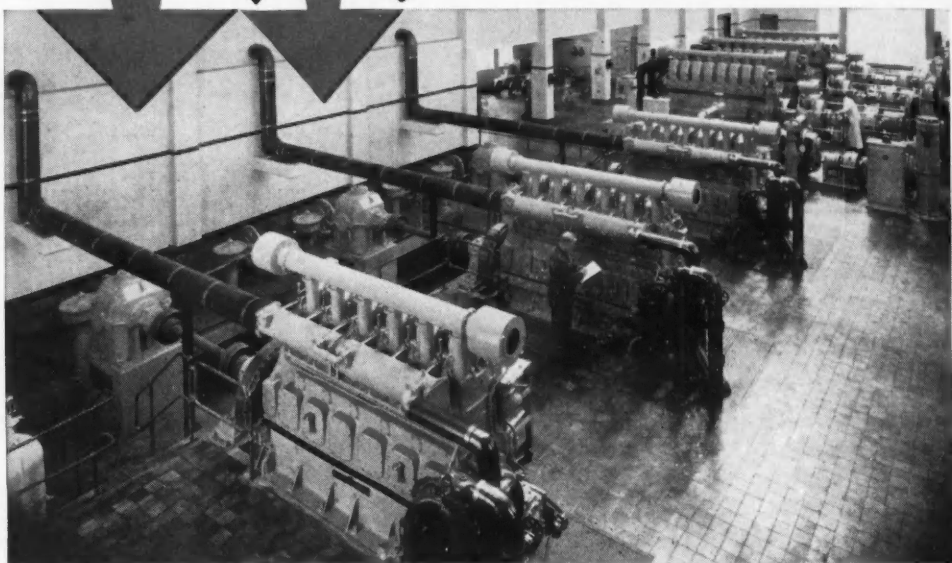
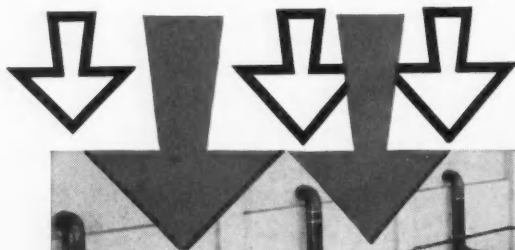
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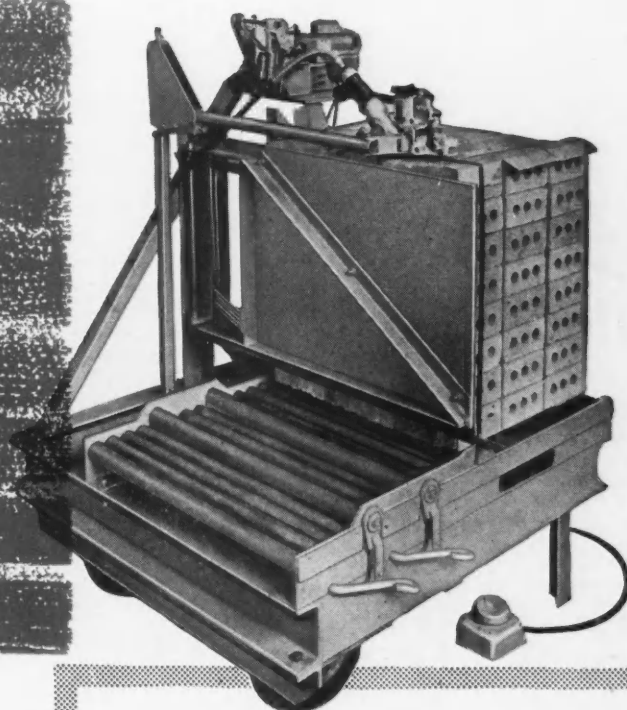
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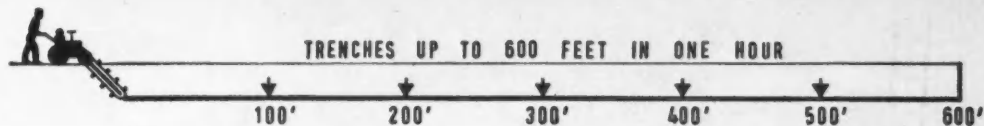
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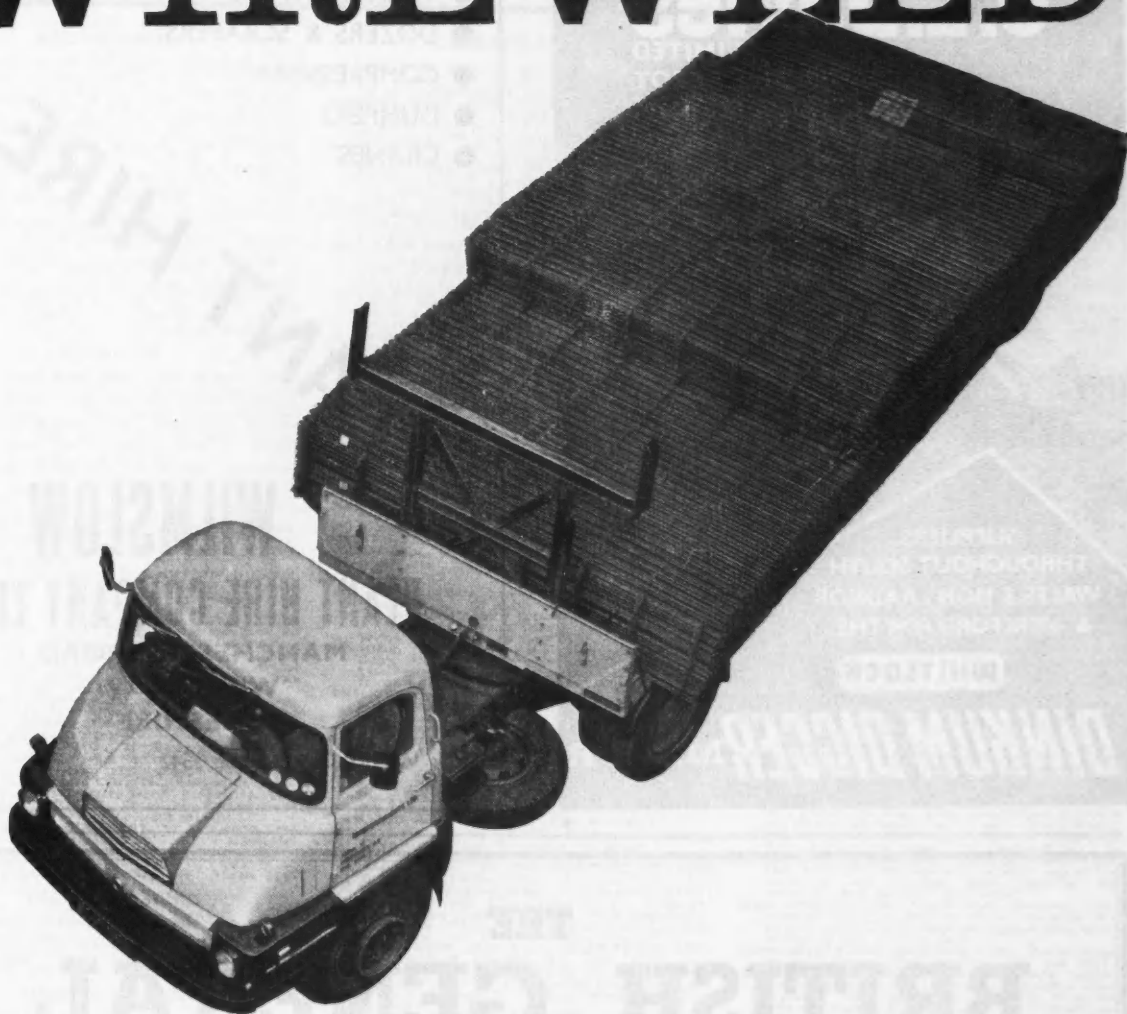


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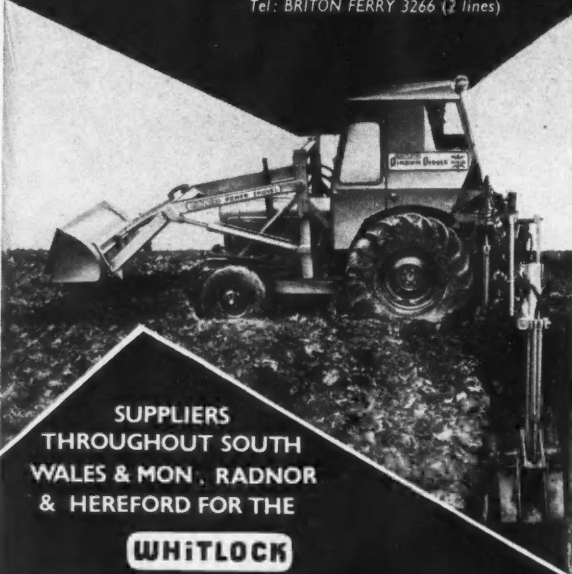


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**ST. IVES SAND AND GRAVEL CO., LTD.**, 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)  
**WEBB, G., CAMBRIDGE**, 35 Magrath Avenue, Cambridge. (Tel.: Cambridge 3969, 4353, 59966.) Supplier, at keenest rates, of "Finest Quality Only" all grades washed sand and gravel, reject stone, hoggins, clinker, ashes, brick rubble, pitching, hardcore and granite chippings. All to B.S. Specifications. Delivered to any site in East Anglia.  
**WELFORD GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Bedfordshire.)

## CARDIGANSHIRE

**NASH ROCKS STONE AND LIME CO., LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)  
**SALOP SAND AND GRAVEL SUPPLY CO.**, Admaston, Wellington (Tel.: 961), Salop.

## CHESHIRE

**BUCKTON QUARRY**, broken stone, all grades. (Tel.: Mossley 122.)  
**CASTLETON SAND AND GRAVEL QUARRIES, LTD.**, Pennant End Quarry, Whaley Bridge. (Tel.: Whaley Bridge 139.) Washed sand and gravel.  
**CAYWOOD, WHARTON AND GRAVEL, LTD.**, Plstyll Gwyn Quarry, Llanarmon, near Mold. (Tel.: Llanarmon-yn-Ial 27.) Crushed limestone and tared macadam, all grades.  
**CHESHIRE AND NORTH WALES TARED MACADAM CO., LTD.**, Llanarmon, near Mold. (Tel.: Llanarmon-yn-Ial 43.) Hard, broken limestone, dry and coated to B.S. Inquiries to registered office—Market Chambers, Tower Square, Tunstall, Stoke-on-Trent. (Tel.: Stoke-on-Trent 8094.)  
**CROXEND GRAVEL, LTD.**, Cheadle, Stoke-on-Trent, Staffs. (Tel.: Tean 393.) Manchester Office: Blackfriars 3766/7. Plant capacity, 2,000 tons per day.  
**DUNNING AND SON, LTD.** (See Shropshire.)  
**HARPER AND THOMAS, LTD.**, Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)  
**HILTON GRAVEL, LTD.**, Rice Street, Liverpool Road, Manchester, 3. (Tel.: Deansgate 5455 and 5456.) Quarries at Cheadle, Staffs. (Tel.: Tean 241.) And at Longton, Stoke-on-Trent. (Tel.: Longton 32196.)  
**HULLAND GRAVEL CO., LTD.**, Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)  
**PENMAENMAWR AND WELSH GRANITE CO., LTD.**, 7 Picton Road, Liverpool, 15. (Tel.: Sefton Park 7251.) All sizes washed and graded granite aggregate from our Collingwood Dock (Liverpool) Depot. Any quantity per day; immediate delivery ex stock.  
**PRESTWICH, WILLIAM, AND SONS, LTD.**, Dronfield, Derbyshire. (Tel.: 2204—6 lines.) Dry and coated Derbyshire limestone and slag for all purposes and to all specifications. "Haddon" foamed slag blocks.  
**TERN HILL SAND AND GRAVEL CO., LTD.**, Allington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffordshire for details.)  
**TRENTHAM GRAVEL CO., LTD.**, Lordley Quarries, Willoughbridge, near Market Drayton, Staffs. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Tared and ready mixed concrete sand. Plant capacity: 2,000 tons per day.  
**WILLIAMS, C. F., LTD.**, Bishop Street Sand Quarry, Turncroft Lane, Stockport. (Tel.: Stockport 7096.) Building sand and concrete sand. Bulk sand and gravel filling a speciality.

## CORNWALL

**PENTEWAN DOCK AND CONCRETE CO., LTD.**, Pentewan Works, near St. Austell. (Tel.: Mevagissey 3335/6.) Gwiltian Works, near Hayle. Pure silica gravel and grit, concrete, building, plastering and asphaltic sands, elvan and granite aggregates, all sizes.

## CUMBERLAND

**BROOMBY'S, LTD.**, Sandisle, Milnthorpe. (Tel.: 3251/2.) Westmorland. (See Westmorland.)  
**ESK MANUFACTURING CO., LTD.**, Dalston Road, Carlisle, Cumberland. (Tel.: Carlisle 2-4941.) All grades washed, crushed gravel and concrete sand to B.S. Specification. Precast concrete products and partition blocks. Sand lime coloured facing and common bricks. Ex works or delivered.

## DENBIGHSHIRE

**SALOP SAND AND GRAVEL SUPPLY CO.**, Admaston, Wellington (Tel.: 961), Salop.

## DERBYSHIRE

**BALLIDON QUARRIES, LTD.**, Ballidon, near Ashbourne, Derbyshire. (Tel.: Farwich 201 and 202.) Clean and graded gravel, limestone to B.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.  
**BURROWS BROTHERS (EXCAVATIONS), LTD.**, Market Place Chambers, West Bars, Chesterfield. (Tel.: Chesterfield 7130.) Red shale, black ashes, graded clinker, filter media, stone slag, sand, gravel and hoggins filling. Bulk quantity supplies.  
**GRAVEL HILL SAND QUARRIES, LTD.**, Ashby (Leics.) 79. (See Leicestershire for details.)  
**HILTON GRAVEL, LTD.**, Hilton, Derby. (Tel.: Etwall 422.) Also at Mercurton. (Tel.: Brinsford 316.) And at Willington. (Tel.: Repton 3215.)

## DERBYSHIRE

**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)  
**HULLAND GRAVEL CO., LTD.**, Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)  
**PRESTWICH, WILLIAM, AND SONS, LTD.**, Dronfield, Derbyshire. (Tel.: 2204—6 lines.) Dry and coated Derbyshire limestone and slag for all purposes and to all specifications. "Haddon" foamed slag blocks.  
**SALISBURY AND WOOD, LTD.**, Matlock (Tel.: 272/273.) Limestone and granite, dry or coated gravel and sand; kerbs, slabs, blocks, posts, reconstructed and natural stone, lime and ground limestone. Lightweight aggregates, ashes, red shale.

## DORSET

**BULL BROS., S. AND L., LTD.**, 126A High Street, Winchester. (Tel.: 2264.) (See Hampshire.)  
**DANGERFIELD, F. J. AND CO., LTD.**, 261A Finchley Road, London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**DORSET LIMESTONES, LTD.**, Bumpers Lane, Easton, Portland, Dorset. (Tel.: Portland 2207/8.) Tared and bituminous macadam, foundation materials, limestone for all purposes and to all gradings. Aggregates, pre-graded in large quantities. Tarmac aggregates for reconstructed stone. By road and sea.  
**GILSON, S. C. AND SONS, LTD.**, Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)  
**HALL AND CO., LTD.**, 8 Commercial Road, Parkstone (Tel.: 5379.)  
**MOREYS (VERWOOD), LTD.**, Verwood, Wimborne, Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggins, path gravel.

## DURHAM

**BRAITHWAITE, A. AND CO., LTD.**, Knaresborough, Yorks. Quarry at Catterick. (Tel.: Old Catt. 137.) (For details see Yorkshire.)

## ESSEX

**ALRESFORD SAND AND BALLAST CO., LTD.**, Alresford Creek, near Colchester, Essex. (Tel.: Wivenhoe 341.) Pits at Alresford Creek, Brightlingsea, Stoke-by-Nayland, Bures and Holland. All grades of washed shingle, concrete sand and building sand. Road and water transport.  
**BAKER, F. AND E., LTD.**, 73 High Road, Rayleigh, Essex. (Tel.: Rayleigh 031/2.) Pits at Great Totham, Heybridge and West Tilbury. All grades of washed material supplied and delivered; also hardcore, ashes and bricks.  
**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: Vigilant 2530.) (For details, see Leeds.)  
**BENT-MARSHALL (LEYTON), LTD.**, 665-667 High Road, Leyton, E.10. (Tel.: Leytonstone 4043/8.) Sand, ballast, brick and concrete hardcore delivered all areas.  
**DANGERFIELD, F. J. & CO., LTD.**, 261A Finchley Rd., London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**FERRIS PITS, LTD.**, The Limes Garage, Fencepiece Road, Barking, Essex. (Tel.: Mainault 5271/2-3001/2.) Pits at Grays, Essex, and Uppminster. All grades of washed aggregates, plastering and building sands supplied and so London and Essex.  
**HALL AND CO., LTD.**, Manor Road, Romford. (Tel.: Romford 42321.) Pits at Aveley, Boreham and Ilford, near Grays. Gravel aggregates, concrete, plastering sand, etc.  
**HUNNABLE, F. A. AND SON, LTD.**, Rayne Road, Braintree, Essex. (Tel.: Braintree 151 and 1351.) Graded washed stone, s.l.n. to reject washed concrete and building sand, soft building sand. Classified sand for asphalt. Pits at Braintree, Bocking, Beasley End, Hedingham and Althamstone.  
**LEIGH BUILDING SUPPLY CO., LTD.**, Head Office: 956 London Road, Leigh-on-Sea, Essex. (Tel.: 78264—5 lines.) All grades washed materials, building sand, hardcore, ashes, bricks, granite, etc.  
**PETERS AND BARNHAM, LTD.**, 209 South Street, Romford. (Tel.: Romford 44141—7 lines.) Washed and crushed gravel, all sizes; sand, Pits at Ashed-dale, Chigwell, Grays, and Barking.  
**READ, P. T., LTD.**, Fairlop Airfield, Forest Road, Ilford. (Tel.: Mainault 6111/2/3.) High grade sand, ballast and shingles supplied and delivered; also ready-mixed concrete.  
**ST. IVES SAND AND GRAVEL CO., LTD.**, 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)  
**STANWAY CONTRACTS, LTD.**, Upper Edwards Hall, Ea.wood, Southend-on-Sea. (Tel.: Eastwood 55161.) Sand and gravel pits at Rochford and Woodham. Walter. Graded aggregates supplied or delivered.  
**WELFORD GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Washed and graded aggregates. Local Office and pits: Tillington 287.  
**WIVENHOE SAND, STONE AND GRAVEL CO., LTD.**, Wivenhoe, near Colchester, Essex. (Tel.: Wivenhoe 231.) High-quality washed aggregates of all grades.

## GLOUCESTERSHIRE

**AMEY'S AGGREGATES, LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billing, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.  
**BENGRI AND SONS, LTD.**, Longmow, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)  
**COKE, F. (CHELTENHAM), LTD.**, 267 Gloucester Road, Cheltenham. (Tel.: Cheltenham 4717/4874.) Sand, graded gravel aggregates, hardcore, limestone, chippings, tared and bituminous limestone, concrete blocks, etc. etc.  
**CROMHALL QUARRIES, LTD.**, Cromhall, Wotton-under-Edge, Glos. (Tel.: Fairfield 346/7.) Concrete aggregates, pre-graded in large quantities. Tarmac macadam, tar-paving, bituminous macadam and cold asphalt to B.S.S. for hand or machine laying.  
**FLOYD AGAR AND CO., LTD.**, Sherston, Malmesbury, Wiltshire. (Tel.: Sherston 237.) Cotswold building stone, hardcore, etc. (Details under Wiltshire.)  
**GRIFFITHS, A. AND SONS, Churchdown, Gloucester.** (Tel.: Churchdown 3135 and 2216.) Pit, quarry and dredger owned. All grades and types aggregate materials.

Rates for insertion in this GUIDE will be forwarded on application

# CONTRACTORS' GUIDE TO AGGREGATES

## GLOUCESTERSHIRE

**HALL AND CO., LTD.**, Longmoor House, Ashton Vale Road, Bristol, 3. (Tel.: 63001.) Gravel aggregates, concreting, plastering and building sand.  
**POOLE (LECLADE), LTD.**, Gravel Pit, Burford Road, Lechlade, Glos. (Tel.: Lechlade 219.)  
**TAYMAC, LTD.**, Wootton Bassett, Swindon. (Tel.: Wootton Bassett 391—5 lines.) (See Wiltshire.)  
**WHITECLIFF QUARRIES AND BRICKWORKS, LTD.**, Coleford, Glos. (Tel.: Coleford 5158/9.) Tarrred and bituminous limestone macadam, asphalt, concrete aggregates, dolomitic media, engineering, facing and common bricks for all purposes. Delivery road or rail.

## HAMPSHIRE

**AMEY'S AGGREGATES, LTD.**, Lower Wootton, Soars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.)  
**BULL BROS. S. AND LTD.**, 126A High Street, Winchester. (Tel.: 2264.) Concreting aggregates (reconstituted, pit-mixed, weighbatched to meet any specification) also ballast, hoggins, path gravel and sand from own pits at Fawley, Lockerley, Ringwood, Romsey, Sway and Totton.  
**DANGERFIELD, F. J. AND CO., LTD.**, 261A Finchley Road, London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**GILSON, S. C. AND SONS, LTD.**, Holcombe, near Bath. (Tel.: Stratton-on-Avon 243.)  
**HALL AND CO., LTD.**, Baltic Wharf, Marine Parade, Southampton. (Tel.: Southampton 21234.) and at Portsmouth. Pits at Ringwood, Highbridge and Totton. Gravel aggregate, concreting, plastering and building sand.  
**HASKINS, G. AND SONS, LTD.**, Queen Street, Emsworth. For washed sands and graded aggregates, path and road gravels, hoggins, clinker, ashes. (Tel.: Emsworth 2271.)  
**MOREYS (VERWOOD), LTD.**, Verwood, Wimborne, Dorset. (Tel.: Verwood 234.) Concrete aggregates, building sand, hoggins, path gravel.  
**NEW MILTON SAND AND BALLAST CO.**, Lymington Road, New Milton, Hants. (Tel.: 37 and 566.) Guaranteed uncrushed, washed, screened and graded concrete aggregates. All sizes. Washed sharp and fine sands.

**PETERSFIELD ENGINEERING AND CONCRETE PRODUCTS, BURTON, JR.**, Petersfield, Hants. (Tel.: Petersfield 1079.) Concrete aggregates, washed and graded, filter media, etc.  
**PRIVETT, W. G. AND SONS, LTD.**, Drayton Lane, Portsmouth. (Tel.: Cosham 70059.) Concrete aggregates, building sand, hoggins, ashes, washed and graded, filter media, etc.  
**RALPH OF BASINGSTOKE, LTD.**, 37 Kempshott Lane, Basingstoke, Hants. (Tel.: 85.) Concrete aggregates, building sand, path gravel, hoggins, etc.  
**WESSEX SAND AND GRAVEL CO., LTD.**, 126 Hillside Avenue, Southampton. (Tel.: 56616.) Pits at Romsey and Fair Oak. Concrete aggregates, hoggins, building sand, etc.

**WRAYSBUURY SAND AND GRAVEL CO., LTD.**, Station Road, Theale, Reading, Berks. (Tel.: Theale 373.)

## HEREFORDSHIRE

**BENGRIY AND SONS, LTD.**, Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) Suppliers of all grades of crushed concrete aggregates, road metal, pitching stone, hardcore and coated macadam.  
**HARPER AND THOMAS, LTD.**, Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)  
**NASH ROCK AND LIME CO., LTD.**, Prestelgne, Radnor. (Tel.: Prestelgne 352.) All grades of tarrred and bituminous macadam, roadstone, chippings and concrete aggregates.  
**OLD RADNOR TRADING CO., LTD.**, Kingston. (Tel.: 11.) Granite and limestone aggregates, coated macadam, concrete products.  
**SALOP SAND AND GRAVEL SUPPLY CO., LTD.**, Admaston, Wellington. (Tel.: 961.)  
**WHITECLIFF QUARRIES AND BRICKWORKS, LTD.**, Coleford, Glos. (Tel.: 5158/9.) (See Gloucestershire.)

## HERTFORDSHIRE

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: Vigilant 2530.) (For details, see Leics.)  
**DANGERFIELD, F. J. AND CO., LTD.**, 261A Finchley Road, London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**EASTWOODS, HALE, LTD.**, Eastwood House, City Road, E.C.1. (Tel.: Clerkenwell 2040.) Broxbourne pit. (Tel.: Hoddesdon 2456.) Producers and distributors of all grades of washed aggregates.  
**GABRIEL, C. LTD.**, Palmers Lane, Enfield, Middx. (Tel.: HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Hertford and Enfield.  
**HALL AND CO., LTD.**, Railway Yard, Orchard Road, Stevenage. (Tel.: 775.) and at Hatfield. Gravel aggregates, concreting, plastering and building sand.  
**ST. IVES SAND AND GRAVEL CO., LTD.**, 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) (See Huntingdonshire for details.)  
**WEBB, G., CAMBRIDGE.**, 35 Magrath Avenue, Cambridge. (Tel.: 3969, 4353, 59966.) (See Cambs.)  
**WINFIELD, HENRY, LTD.**, Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamstead 1208/9.) Pits at Hemel Hempstead, Watford, West Hyde, Rickmansworth. Concrete aggregates, hoggins, building sand.

## HUNTINGDONSHIRE

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: Vigilant 2530.) (For details, see Leics.)  
**FERRERS AND AGGREGATES, LTD.**, Northampton Road Quarries, Rushden (2354/5). (See Northants.)  
**GRAVEL PRODUCTS (HUNTS), LTD.**, St. Neots, Hunts. (Tel.: St. Neots 123.) Pits at Little Paxton, near St. Neots. (Tel.: St. Neots 309.) Deliveries in Beds, Hunts, and South Cambs.  
**NENE BARGE AND LIGHTER CO., LTD.**, Market Chambers, Peterborough. (Tel.: 5534/5.) and Ship End Quarries, Wansford, near Peterborough. (Tel.: Wansford 384/5.) Roadstone, hardcore, broken stone, ballast, ashes, silica clay and sand.  
**ST. IVES SAND AND GRAVEL CO., LTD.**, 22 The Broadway, St. Ives, Hunts. (Tel.: St. Ives 2441/2/3/4.) Producers of all grades of washed sand and gravel. Ready mixed concrete. Precast concrete of every description.  
**WEBB, G., CAMBRIDGE.**, 35 Magrath Avenue, Cambridge. (Tel.: 3969, 4353, 59966.) (See Cambs.)  
**WELFORD GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Bedfordshire.)

## KENT

**BRASTED SAND PITS, Brasted, Kent.** (Tel.: 586.) London office: 10A Ellery Street, S.E.15. (Tel.: New Cross 3337.) Soft and plastering sands, lime and sand-mix dry, hardcore, S.H. bricks, ashes, etc.  
**BROWN BROS. (SITTINGBOURNE), LTD.**, Chalkwell Road, Sittingbourne, Kent. (Tel.: Sittingbourne 330.) Sand, ballast, shingle, hardcore, clinker, breeze blocks, etc.  
**CLUBB, J., LTD.**, Dartford, Kent. (Tel.: Dartford 25431.) Pits in North Kent, Medway area and Sevenoaks district. All washed and crushed gravel aggregates, concreting and building sand.  
**DIAMOND TREAD CO. (1938), LTD.**, Ditton Court Quarry, Larkfield, near Maidstone. (Tel.: West Malling 3444.) Quarry owners; tarmacadam, bituminous macadam and dry road stone manufacturers and suppliers. Head Office: 21-22 Old Bailey, London, E.C.4. (Tel.: City 7001—10 lines.)  
**DIAMOND TREAD CO. (CHART), LTD.**, Swan Lane Quarries, Little Chart, Ashford, Kent. Quarry owners; tarmacadam, bituminous macadam and dry roadstone suppliers. All inquiries to Area Office: Ditton Court Quarry, Larkfield, near Maidstone, Kent. (Tel.: W. Malling 3444.)  
**HALL AND CO., LTD.**, Canning Street, Maidstone. (Tel.: Maidstone 51051.) and at Folkestone and Hayes. Pits at Lunsford, near Larkfield. Gravel aggregates, concreting, plastering and building sand. Surecrete precision-mixed concrete.  
**HARRIS, M. P. AND CO., LTD.**, Station Road, Paddock Wood, Kent. (Tel.: 385.) (See Sussex.)  
**TILBURY CONTRACTING AND DREDGING CO., LTD.**, Postley, Maidstone. (Tel.: Maidstone 55401/2/3.) Suppliers of tarrred, bituminous and dry Kentish ragstone, sea walling, asphalt fillers, Scotch granite and kerbing.

## LANCASHIRE

**BROOMBYS, LTD.**, Sandside, Milnthorpe. (Tel.: 3251/2.) Westmorland. (See Westmorland.)  
**BUCKTON QUARRY, Broken stone, all grades.** (Tel.: Mossley 123.)  
**CASTLETON SAND AND GRAVEL QUARRIES, LTD.**, Trows Lane, Castleton, nr. Rochdale. (Tel.: Castleton 57100.) Lee Quarries, Bacup. (Tel.: Bacup 287.) Washed pit sand, crushed washed stone aggregates: concrete products.  
**CROFT GRANITE BRICK AND CONCRETE CO., LTD.**, West Bank, Widnes. (Tel.: 2636.) Kubitized granite aggregate to B.S.S., tarrred and bituminous macadam, cold asphalt, "Croftmat" Wet Mix, filter media, concrete products.  
**CROXEN GRAVEL, LTD.**, Cheadle, Stoke-on-Trent, Staffs. (Tel.: Team 393.) Manchester Office: Blackfriars 3766/7. Plant capacity, 2,000 tons per day.  
**DUNNING AND SON, LTD.** (See Shropshire.)  
**HARTLEY, JOHN W., LTD.**, Lundsfield Quarry, Carnforth, Lanc. Sals. (Tel.: Carnforth 100.) Large producers of highest quality washed sands, clean washed natural pebble and crushed gravel aggregates for all construction purposes.  
**HILTON GRAVELS, LTD.**, Rice Street, Liverpool Road, Manchester, 3. (Tel.: Deansgate 5455 and 5456.) Quarries at Cheadle, Staffs. (Tel.: Team 241.) And at Longton, Stoke-on-Trent. (Tel.: Longton 32196.)  
**HULLAND GRAVE, CO., LTD.**, Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323.) 2,119 and 2,195. Manchester Office: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)

**PENMAENMAWR AND WELSH GRANITE CO., LTD.**, all sizes and gradings. Crushed granite aggregate. Immediate delivery ex stock.  
**Liverpool and Preston Depots:**  
 Office: 7 Picton Road, Liverpool, 15. (Tel.: Salford 7261.)  
 Manchester Depot:  
 Office: Cornbrook Road, Manchester, 15. (Tel.: Trafford Park 350.)

**ROUND QUARRIES, LTD.**, Helsby Street, Warrington. (Tel.: 35451—4 lines.) Building and concrete sand and shale.  
**TERN, S. AND GRAVEL CO., LTD.**, Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 2617/3.) (See Staffs. for details.)  
**TRENTHAM GRAVEL CO., LTD.**, Lordships Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pine Gate 04/5.) All sizes crushed or natural washed gravel. Twice-washed sharp concreting sand. Plastering sand. Plant capacity: 2,000 tons per day.

**WELBY GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Local Office and pits: Chorley 3923.  
**WITBORN LIMEONE, LTD.**, Black Lane Quarry, Carnforth. (Tel.: Carnforth 327.) Graded limestone aggregate to B.S.S., all sizes. Immediate delivery ex stock.  
**X.I. GRANITE (INGLETON), LTD.**, Head Office: Clapham, via Lancaster. (Tel.: Clapham 318/9.) Works Tel.: Ingleton 231. All sizes and gradings of Ingleton granite aggregate.

## LEICESTERSHIRE

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: Vigilant 2530.) Best Leicestershire grey granite, dry and coated gradings to any specification, cold asphalt and wet mix. Prompt rail/road delivery.  
**BRUNTINGTHORPE GRAVELS, LTD.**, Gilmorton, near Rugby. (Tel.: Lutterworth 46.) All sizes gravel aggregate, building and concrete sand to B.S.S., scientifically balanced ballast.  
**CLIFFE HILL GRANITE CO., LTD.**, Markfield, near Leicester. (Tel.: Markfield 5612/3.) Granite aggregates to B.S.S. All sizes. Tarrred and bituminous granite, concrete slabs and kerbs. Transmitted concrete.  
**CROFT GRANITE, BRICK AND CONCRETE CO., LTD.**, Croft, near Leicester. (Tel.: Narborough 126.) Kubitized "granite" aggregate to B.S.S., tarrred and bituminous macadam, cold asphalt, "Croftmat" Wet Mix, filter media, concrete products.  
**DUSTON STONE QUARRIES, LTD.**, New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) (See Northamptonshire.)  
**ENDERBY AND STONEY STANTON GRANITE CO., LTD.**, 21 New Walk, Leicester. (Tel.: S6682.) Quarries at Enderby. London Offices: 29 Dorset Square, N.W.1. (Tel.: Amb. 1141.)  
**GRAVEL HILL SAND, LTD.**, Hemington Fields, near Ashby-de-la-Zouch. (Tel.: Ashby 79.) Works: Hartshorne, Derbys. Yellow screened plastering and building sand, all to B.S.S.  
**HILTON GRAVEL, LTD.**, Hemington Fields, near Sharrow, Derby. (Tel.: Sharrow 266.)

## LEICESTERSHIRE

**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)  
**MOUNTSOREL GRANITE CO., LTD.**, 21 New Walk, Leicester. (Tel.: 56682.) Quarries at Mountsorrel, near Loughborough, 1/2 in. pink granite a speciality. London Office: 29 Dorset Sq., N.W.1. (Amb. 1141.)  
**WANLIP GRAVELS, LTD.**, Wanlip Road, Syston, Leicester. Any size or grading, scientifically balanced ballast. All to B.S.S. (Tel.: Syston 2327 and 2797.)  
**WELFORD GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) (See Northamptonshire.)  
**WREAKE VALLEY GRAVELS CO., LTD.**, Melton Mowbray. (Tel.: Pits—Rotherby 205 or head office Melton 2488.) All grades washed aggregates and sand.

## LINCOLNSHIRE

**CONINGSBY SUPPLY CO., LTD.**, Registered Office: The Broadway, Woodhall Spa, Lincs. (Tel.: Woodhall Spa 3150.) Screened limestone, hardcore, pitching, filling, flint, hoggins. Ex quarries or delivered.  
**DOW-MAC (PRODUCTS), LTD.**, Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 311.)  
**EAST MIDLANDS BUILDERS' SUPPLY CO.**, 21 Castledyke West, Barton-on-Humber, Lincs. (Tel.: Barton 2189.) All grades washed sand and gravel, roadstone, hardcore, washed silica sand.  
**GIBBONS, P. B. AND SONS, LTD.**, Registered Office: Welby House, Market Deeping, near Peterborough. (Tel.: Market Deeping 3321/2383.) Pits at Lingscott, near Peterborough. (Tel.: Market Deeping 2210.) All grades washed sand and aggregates.  
**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)  
**PETERBOROUGH QUARRIES, LTD.**, Sandvands, Maxey, Peterborough. (Tel.: Market Deeping 235—3 lines.) Quarry at Ropley, all grades of hardcore and broken stone. (See also Northants.)  
**POLLARD, C. AND SON (TALLINGTON), LTD.**, Walk House, Langtoft, Peterborough. Pits at Tallington, near Stamford, Lincs. (Tel.: Market Deeping 2140.) All grades washed sand and aggregates. For "Supercrete" ready mixed concrete, phone Market Deeping 3132.  
**TRENTFORD GRAVELS, LTD.**, Head Office: Deansgrove Grimsby. (Tel.: Grimsby 5354.) Washed and graded gravel and sand, roadstone, hardcore, slag, tarmac, ashes, etc. Pits and quarries throughout the county.

## LONDON

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: Vigilant 2530.) (For details, see Leics.)  
**COX, H. AND SONS, LTD.**, 33 Southampton, Camberwell, S.E.5. (Tel.: Rodney 2215—3 lines.)  
**CROFT GRANITE BRICK AND CONCRETE CO., LTD.**, 126-136 Edge Street, Middlesex. (Tel.: Edgware 0076/7 and 1246.) "Kubitized" granite aggregate to B.S.S., tarrred and bituminous macadam, cold asphalt, "Croftmat" Wet Mix, filter media 2195.  
**DANGERFIELD, F. J. AND CO., LTD.**, 261A Finchley Road, N.W.3. (Tel.: HAMstead 8044-8.) Granite limestone or slag, coated or dry, all sizes and gradings, granite and tarmac, washed and graded gravel and sand, roadstone, hardcore, slag, tarmac, ashes, etc. Pits and quarries throughout the county.  
**DORSET LIMESTONES, LTD.**, Bumpers Lane, Easton, Portland, Dorset. (Tel.: Portland 2207/8.) (For details, see Dorset.)  
**DRINKWATER, W. W. (WILLEDEN), LTD.**, Dudden Hill Lane, Willesden, N.W.10. (Tel.: GLADstone 6400/5.) Pits: Rush Green, Denham, Bucks. (Tel.: Denham 2241/2/3.) Also Staines Road, Hounslow Heath, Middlesex. (Tel.: Hounslow 6222/3.)  
**GABRIEL, C. LTD.**, Palmers Lane, Enfield, Middx. (Tel.: HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.  
**HALL AND CO., LTD.**, Chantry House, Eccleston Street, S.W.1. (Tel.: Sloane 7122.) and at East Dulwich, Poplar and Wandsworth. Gravel aggregates, concreting, plastering and building sand.  
**KEEN, W. J. AND SONS, 18 Granville Road, Epping, Essex.** (Tel.: Epping 2520.) All sands, ballasts, and hardcore suppliers.  
**LONDON BALLAST CO., LTD.** (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.  
**READ, P. T., LTD.**, Gales Gardens, Bethnal Green, E.2. (Tel.: Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered; also ready mixed concrete. Pits: Fairlop Airfield, Forest Road, Ilford, Essex. (Tel.: Hainault 6111/2/3.)  
**ROADS RECONSTRUCTION (1934), LTD.**, Stockley Lane, West Drayton, Middlesex. (Tel.: West Drayton 3041.) All sizes broken limestone, dry and coated to British Standards.

## MERIONETHSHIRE

**SALOP SAND AND GRAVEL SUPPLY CO.**, Admaston, Wellington. (Tel.: 961.) Salop.

## MIDDLESEX

**CROSS, GEO. C. AND CO., LTD.**, Uxbridge Road, Southall. (Tel.: Southall 2264/5/6.) Concrete aggregates, hardcore, excavations, demolitions.  
**DRINKWATER, W. W. (WILLEDEN), LTD.**, Staines Rd., Hounslow Hth., Middx. (Hounslow 6222/3.)  
**GABRIEL, C. LTD.**, Palmers Lane, Enfield, Middx. (Tel.: HOWARD 4351/2/3.) Washed aggregates and building sand. Pits at Enfield and Hertford.  
**GRUNDON, S.**, 79 Harrington Road, Hillingdon, Middlesex. (Tel.: Uxbridge 4156.) Sand, ballast, shingle, hardcore, ashes, excavations and demolition.  
**HALL AND CO., LTD.**, Chantry House, Eccleston Street, S.W.1. (Tel.: Sloane 7122.) and at Ashford and Brentford. Pit at Bedford, near Feltham. Gravel aggregates, concreting, plastering and building sand.  
**LONDON BALLAST CO., LTD.** (Tel.: Paddington 5064.) 55A Porchester Terrace North, Paddington, W.2.  
**READ, P. T., LTD.**, Gales Gardens, Bethnal Green, E.2. (Tel.: Shoreditch 9128/9.) All sands, ballast and shingles supplied and delivered; also ready mixed concrete. Pits: Edmondton Gravel Pit, Montagu Road, N.9. (Tel.: Shoreditch 9128/9.) and Fairlop Airfield, Forest Road, Ilford. (Tel.: Hainault 6111/2.)

# CONTRACTORS' GUIDE TO AGGREGATES

## MIDDLESEX

**STUART MACEY, LTD.**, Gordon Road, High Wycombe. (Tel.: High Wycombe 2591/2.)  
**THAMES SAND AND GRAVEL CO., LTD.**, Fordbridge Road, Shepperton. (Tel.: Walton-on-Thames 23616.) Gravel aggregates, concreting, plastering and building sand.  
**WRAYSURRY SAND AND GRAVEL CO., LTD.**, Pits at Wraysbury. (Tel.: Wraysbury 184.) Gravel aggregates, concreting, plastering and building sand.

## MID-WALES

**BENGRY AND SONS, LTD.**, Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)  
**HARPER AND THOMAS, LTD.**, Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)  
**NASH ROCKS STONE AND LIME CO., LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)  
**OLD RADNOR TRADING CO., LTD.**, Quarries in Radnorshire. (Kington 11.) (See Herefordshire.)  
**SALOP SAND AND GRAVEL SUPPLY CO., LTD.**, Admaston, Wellington. (Tel.: 961.) Salop.  
**TERN HILL SAND AND GRAVEL CO., LTD.**, Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

## MONMOUTHSHIRE

**IN-SITU CONCRETE, LTD.**, Victoria Works, Ebbw Vale (Tel. 3032), and Phoenix Works, Cardiff (Cardiff 63311), for limestone and slag aggregates, ready-mixed concrete, tarmacadam, media, filling, etc., kerbs and pavings.  
**MONMOUTHSHIRE ASSOCIATED QUARRIES, LTD.**, Head Office: 38 Chestnut Road, Newport, Mon. (Tel.: Newport 58311/2.) Suppliers of all grades of concrete aggregates, road metalling, pitching stone, tarmacadam and bituminous macadam in limestone, dolomite and blue pennant stone. Quarries throughout the county.  
**WHITECLIFF QUARRIES AND BRICKWORKS, LTD.**, Coleford, Glos. (Tel. 3158/9.) (See Gloucestershire.)

## MONTGOMERYSHIRE

**HARPER AND THOMAS, LTD.**, Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)  
**NASH ROCKS STONE AND LIME CO., LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)  
**SALOP SAND AND GRAVEL SUPPLY CO., LTD.**, Admaston, Wellington. (Tel.: 961.) Salop.

## NORFOLK

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)  
**FRECKENHAM GRAVEL CO., LTD.**, The Brook, Sutton, Ely, Cambs. (Tel.: Sutton 391/3.) Washed sand and gravel. Pitt. Feltwell.  
**JOHNSON, P. C. H., LTD.**, Station Road, Terrington St. Clement, near King's Lynn. (Tel.: Terrington St. Clement 248.) Washed and screened gravel, roadstone, washed shingle and sand.  
**SNETTERTON STONE QUARRIES, LTD.**, Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamstead 1208/9.) Pits at Snetterton. Concrete aggregates, building sand and gravel.  
**THORPE GRAVEL PITS, LTD.**, Harvey Lane, Norwich. (Tel.: Norwich 332434.) Washed and graded aggregates, stone and gravel delivered to all parts of Norfolk and Suffolk.

## NORTHAMPTONSHIRE

**AMEY'S AGGREGATES, LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billington, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.  
**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)  
**BICESTER STONE CO., LTD.**, Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades limestone tarmacadam, dry, pitching stone, hardcore, etc.  
**BILLING GRAVEL CO., LTD.**, Station Road, Billing, Northampton. (Tel.: Cogenhoe 219.) London Office: 23 Berkeley Square, W.1. (Tel.: Mayfair 6341.)  
**BRAYBROOK, E. W., LTD.**, Newton Road, Higham Ferrers, Northants. (Tel.: Rushden 3344 and 3345.) All grades of washed and graded aggregates to B.S.S., building sand, hardcore.  
**DOW-MAC (PRODUCTS), LTD.**, Tallington, Stamford. All grades of washed sand and gravel. (Tel.: Market Deeping 2301.)  
**DUSTON STONE QUARRIES, LTD.**, New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) Producers of building and walling stone roadstone, hardcore, broken stone, ashes, sand, gravel and hoggins. Immediate delivery throughout Northamptonshire.  
**FERRERSAND AGGREGATES, LTD.**, Northampton Road Quarries, Rushden, Northants. (Tel.: Rushden 2354/5.) Largest producers in the county of all grades of high-quality concrete aggregate to B.S.S. Deliveries throughout Northamptonshire and adjoining counties.  
**GIBBONS, F. B., AND SONS, LTD.**, Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 3321/2383.) (See Lincolnshire for details.)  
**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)  
**KETTON STONE CO. (Prop. Andrew's Garage),** Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.  
**MACKNESS, A. J., LTD.**, Ransome Road, Northampton. (Tel.: Northampton 589.) Producers of all grades of washed aggregates. Building sand. Mixmortar (lime and mortar). Prompt deliveries.  
**NENE BARGE AND LIGHTER CO., LTD.**, Market Chambers, Peterborough. (Tel. 5534/5.) and Ship End Quarries, Wansford, near Peterborough. (Tel.: Wansford 384/5.) Roadstone, hardcore, broken stone, ballast, ashes, silica clay and sand.  
**NEWARK (PETERBOROUGH) SAND AND GRAVEL CO., LTD.**, 127 Eastfield Road, Peterborough. (Tel.: Peterborough 2091.) All grades washed and screened gravel and sand.

## NORTHAMPTONSHIRE

**PETERBOROUGH QUARRIES, LTD.**, Sandylands, Maxey, Peterborough. (Tel.: Market Deeping 2355.) Eight quarries supplying all grades of hardcore and broken stone. Also Wetmix at Yarwell, Wansford. All grades gravel and sand at Maxey.  
**POLLARD, C., AND SON (TALLINGTON), LTD.**, Walk House, Langford, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)  
**WELFORD GRAVELS, LTD.**, Head Office: Goldington, Bedford. (Tel.: 4587/8/9.) Largest producers of all grades of washed aggregates in Northamptonshire and Bedfordshire. Regular deliveries anywhere. Local office and pits: Fortly Ford. (Tel.: Welford 256.)

## NORTH WALES

**CAWOOD, WHARTON AND CO., LTD.**, Playlly Gwyn Quarry, Llanarmon, near Mold. (Tel.: Llanarmon-y-nial 27.) Crushed limestone and tarred macadam, all grades.  
**CHESHIRE AND NORTH WALES TARRED MACADAM CO., LTD.**, Llanarmon, near Mold. (Tel.: Llanarmon-y-nial 43.) Hard, broken limestone; dry and coated to B.S.S. Inquiries to Registered Office—Market Chambers, Tower Square, Tunstall, Stoke-on-Trent. (Tel.: Stoke-on-Trent 88094.)  
**ENSTON BROS.**, Liwyn Isaf Quarry, Clynno Fawr, Caernarvon. (Tel.: Clynno Fawr 297/8.) All sizes crushed, washed natural sand and gravel. Highest quality. Precast concrete products, ex our Griffiths Crossing Factory, Caernarvon. (Tel.: Caernarvon 2535/6.) Crushed granite ex our quarry, Pengwern and Gwydyr Quarries, Ltd., Trefriw, Llanrwst, Denbighshire. (Llanrwst 38.)  
**PENMAENMAWR AND WELSH GRANITE CO., LTD.**, Quarries at Penmaenmawr. (Tel. 2256/8), and at Trevor. (Tel.: Clynno Fawr 223.) Caernarvonshire. All sizes and gradings of crushed granite aggregate. Any quantity per day; immediate delivery ex stock. Coated granite also available.  
**RUTHIN AND DENBIGH TARMACADAM CO., LTD.**, Denbigh. (Tel.: Denbigh 75.) Lime, limestone, carbonate of lime, tarmacadam, etc. Also inquiries to Lunt Bros., Ltd., 23 Colmore Row, Birmingham. (Tel.: Central 7408—1 line), and Lunt Bros., Ltd., Stourbridge. (Tel. 5201—6 lines.)  
**TERN HILL SAND AND GRAVEL CO., LTD.**, Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)

## NOTTINGHAMSHIRE

**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)  
**GLEN QUARRIES, LTD.**, Central Chambers, Wellgate, Rotherham. (Tel.: Rotherham 5223.) Crushed and graded stone, concreting sand, building sand, plastering sand and crushed gravel; could be collected ex quarry or delivered.  
**GUNTHORPE GRAVELS (1958), LTD.**, (Tel.: Nottingham 77537; and Works: Lowdham 2131.) (An associate company of Hoveringham Gravel Co., Ltd.) All grades washed gravel and sand to B.S.S.  
**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) Quarries at Hoveringham, Holme Pierrepont, Colwick, Bleasby and Newark. All grades of washed gravel and sand to any specification. Crushed quartzite for surface dressing of roads a speciality. Plant capacity 8,000 tons per day.  
**NEWARK GRAVEL AND CONCRETE CO., LTD.**, Grove Street, New Balderton, Newark, Notts. (Tel.: Newark 401.) All grades washed sand and aggregates.  
**NORTH NOTTS. GRAVEL CO., LTD.**, Bellmoor, Retford, Notts. (See Yorkshire.)  
**PRESTWICK, WILLIAM, AND SONS, LTD.**, Dronfield, Derbyshire. (Tel.: 2304—6 lines.) Dry and coated Derbyshire limestone and slag for all purposes and to all specifications. "Haddon" foamed slag blocks.  
**SALISBURY AND WOOD, LTD.**, Matlock. (Tel.: 272/273.) (For details, see Derbyshire.)

## OXFORDSHIRE

**AMEY'S AGGREGATES, LTD.**, Lower Wootton, Boars Hill, Oxford. (Tel.: Oxford 35421—10 lines.) Pits at Dry Sandford, near Abingdon, Sutton Courtenay, near Abingdon. (Tel.: Sutton Courtenay 275.) Theale, near Reading. (Tel.: Theale 358.) Dorchester, Oxon. (Tel.: Clifton Hampden 236.) Billington, Northampton. (Tel.: Cogenhoe 464) for washed and graded aggregates to B.S.S.  
**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)  
**BENGRY AND SONS, LTD.**, Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)  
**BICESTER STONE CO., LTD.**, Stratton Audley, Bicester, Oxon. (Tel.: Stratton Audley 238.) Manufacturers and suppliers of all grades limestone, tarmacadam, dry, pitching stone, hardcore, etc.  
**CURTIS, J., AND SONS, LTD.**, Botley Works, Oxford. (Tel.: Oxford 41081/2/3.) Sand and all grades of washed aggregates. Pits at Radley, near Abingdon. (Tel.: Abingdon 441.)  
**DANGERFIELD, F. J., AND CO., LTD.**, 261A Finchley Road, London, N.W.3. (Tel.: HAMstead 8044/8.) For all road aggregates, kerbs, setts. (See London.)  
**DIX, G. H., AND SON, LTD.**, Freeland, Oxon. (Tel.: Freeland 234.)  
**DUSTON STONE QUARRIES, LTD.**, New Duston, Northampton. (Tel.: Brixworth 278 and 298; Duston 505.) (See Northamptonshire.)  
**GRUNDON, S. (EWELME), LTD.**, Ewelme, Oxon. (Tel.: Ewelme 20.) London Office (Tel.: Unbridge 446.) All grades washed aggregates. Path hoggins, broken stone, building and walling stone.  
**HAINES, H. (WITNEY), LTD.**, Oxford Road, Witney. (Tel.: Witney 42.) All grades washed aggregates, hardcore, pitching and broken stone, Cotswold building and walling stone.  
**SNETTERTON STONE QUARRIES, LTD.**, Pix Farm Lane, Hemel Hempstead, Herts. (Tel.: Berkhamstead 1208/9.) Roadstone, Cotswold building and walling stone.  
**WRAYSURRY SAND AND GRAVEL CO., LTD.**, Theale, Reading, Berks. (Tel.: Theale 373.)

## RADNORSHIRE

**BENGRY AND SONS, LTD.**, Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)

## RADNORSHIRE

**NASH ROCKS STONE AND LIME CO., LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)  
**OLD RADNOR TRADING CO., LTD.**, Quarries in Radnorshire. (Tel.: Kington 11.) (See Herefordshire.)  
**SALOP SAND AND GRAVEL SUPPLY CO., LTD.**, Admaston, Wellington. (Tel.: 961.) Salop.

## RUTLAND

**GIBBONS, F. B., AND SONS, LTD.**, Welby House, Market Deeping, Peterborough. (Tel.: Market Deeping 3321/2383.) (See Lincolnshire for details.)  
**HOVERINGHAM GRAVEL CO.**, Hoveringham, Nottingham. (Tel.: Lowdham 3171—15 lines.) (For details, see Nottinghamshire.)  
**KETTON STONE CO. (Prop. Andrew's Garage),** Ketton, near Stamford. (Tel.: Ketton 206.) Hardcore, roadstone, crushed stone, top soil, silica clay. Quarries at Ketton.  
**PETERBOROUGH QUARRIES, LTD.**, Sandylands, Maxey, Peterborough. (Tel.: Market Deeping 2355.) Quarry at Greatham, all grades of broken stone and hardcore. (See also Northamptonshire.)  
**POLLARD, C., AND SON (TALLINGTON), LTD.**, Walk House, Langford, Peterborough. (Tel.: Market Deeping 2140.) (See Lincolnshire for details.)

## SCOTLAND

**KEIR AND CAWDEY, LTD.**, Kirkintilloch Road, Bishopbriggs. (Tel.: Bishopbriggs 3200.) All grades washed sand and gravel aggregates.

## SHROPSHIRE

**BALLIDON QUARRIES, LTD.**, Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.  
**BENGRY AND SONS, LTD.**, Longmoor, Kingsland, Leominster, Herefordshire. (Tel.: Kingsland 301/4.) (See details under Herefordshire.)  
**DUNNING AND SON, LTD.**, Haughmond Quarry, near Shrewsbury. (Tel.: Upton Magna 286/7.) All grades of high-quality roadstone, concrete aggregates and coated macadam. All to B.S.S. Any tonnage available for immediate delivery.  
**HARPER AND THOMAS, LTD.**, Bayston Hill Quarry, Shrewsbury. (Tel.: Bayston Hill 351.) High quality roadstone, chippings, concrete aggregates, hardcore and coated macadam. Large tonnages always avail.  
**NASH ROCKS STONE AND LIME CO., LTD.**, Presteigne, Radnor. (Tel.: Presteigne 352.) (See Herefordshire for details.)  
**OLD RADNOR TRADING CO., LTD.**, Kington. (Tel.: 11.) (See Herefordshire.)  
**SALOP SAND AND GRAVEL SUPPLY CO., LTD.**, Admaston, Wellington. (Tel.: 961.) Salop.  
**TERN HILL SAND AND GRAVEL CO., LTD.**, Alington Quarries, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) (See Staffs. for details.)  
**TRENTHAM GRAVEL CO., LTD.**, Lordley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel, concrete aggregates, sharp concreting sand. Plant capacity: 2,000 tons per day.

## SOMERSET

**ASHAM QUARRY CO., LTD.**, Chantry, Frome. (Tel.: Nunney 351.) All sizes limestone block, broken and aggregates. Tarred and bituminous macadam to B.S. Ex quarry and delivered.  
**DANGERFIELD, F. J., AND CO., LTD.**, 216A Finchley Road, London, N.W.3. (Tel.: HAMstead 8044/8.) All sizes road aggregates, kerbs, setts. (See London.)  
**GILSON, S. C., AND SONS, LTD.**, Holcombe, near Bath. (Tel.: Stratton-on-the-Fosse 243.)  
**HALL AND CO., LTD.**, Longmoor House, Ashton Vale Road, Bristol, 3. (Tel.: 63001.) Gravel aggregates, concreting, plastering and building sand.  
**ROADS RECONSTRUCTION (1934), LTD.**, Stoneleigh House, Frome. (Tel.: Frome 2361.) All sizes broken limestone, dry and coated, to British Standards. Precast concrete products.  
**WAINWRIGHT, JOHN, AND CO., LTD.**, Shepton Mallet. (Tel.: Shepton Mallet 2366/7.) All sizes basalt, coated basalt, concrete aggregates, filtering media, building blocks and slabs.

## SOUTH SCOTLAND

**ESK MANUFACTURING CO., LTD.**, Carlisle. (Tel.: Carlisle 2-4941.) (For details see Cumberland.)

## SOUTH WALES

**IN-SITU CONCRETE, LTD.**, Victoria Works, Ebbw Vale (Tel. 3032), and Phoenix Works, Cardiff (Cardiff 63311), for limestone and slag aggregates, ready-mixed concrete, tarmacadam, media, filling, etc., kerbs and pavings.  
**PENMAENMAWR AND WELSH GRANITE CO., LTD.**, 18 Quay Street, Cardiff. (Tel.: 20848/7.) All sizes and gradings of crushed granite aggregate from our Cardiff and Swansea Dock Depots. Dolomite aggregates from Ewenny Quarry, Bridgend. (Tel. 1086/7.) Coated stone also available.  
**SESSIONS AND SONS, LTD.**, West Dock, Cardiff. Producers of coarse and fine aggregate, dredged and graded to British Standards. Branches Newport and Swansea. (Also Gloucestershire and Hereford.)  
**SOUTH WALES SAND AND GRAVEL CO., LTD.**, Head Office: P.O. Box 8, Beaufort Buildings, Swansea. (Tel. Swansea 53071.) Sand and gravel merchants, builders' merchants, Pennant Quarry owners, slag, hardcore, ashes, pitching, graded clinker, filter media. Depots: Cardiff, Newport, Barry, Port Talbot, Briton Ferry, Swansea, Llanelli.

## STAFFORDSHIRE

**BALLIDON QUARRIES, LTD.**, Ballidon, near Ashbourne, Derbyshire. (Tel.: Parwich 201 and 202.) Clean and graded dry limestone to B.S.S., all sizes, coated limestone to B.S. 802 and 1621 and wet-mix; large output; reliable deliveries.  
**BARDON HILL QUARRIES (ELLIS AND EVERARD), LTD.**, near Leicester. (Tel.: Coalville 1226/7/8; or London: VIGILANT 2530.) (For details, see Leics.)  
**CROXEDEN GRAVEL, LTD.**, Cheadle, Stoke-on-Trent, Staffs. (Tel.: Tean 393.) Manchester Office: Peterkirk 3766/7. Plant capacity, 2,000 tons per day.

# CONTRACTORS' GUIDE TO AGGREGATES

## STAFFORDSHIRE

**DUNNING AND SON, LTD.**, Wood End Gravel Pits, Hednesford. (Tel.: Hednesford 302/325.) Washed sand and gravel. All to B.S.5. High-quality road-stone, concrete aggregates and coated macadam from our Haughmond Quarry, near Shrewsbury. (See Shropshire.)

**GRAVEL HILL SAND QUARRIES, LTD.**, Tel.: Ashby (Leics.) 79. (See Leicestershire for details.)

**HARPER AND THOMAS, LTD.**, Bayston Hill Quarry, Shrewsbury. (See Shropshire for details.)

**HILTON GRAVEL, LTD.**, Cheadle, Staffs. (Tel.: Team 241.) Also at Longton, Stoke-on-Trent (Tel.: Longton 32196) and Stretton, Burton-on-Trent (Tel.: Burton 60611).

**HULLAND GRAVEL CO., LTD.**, Cheadle, Stoke-on-Trent. (Tel.: Cheadle 2323/4, 2119 and 2195.) Manchester Office: 464 Wilbraham Road, Chorlton, Manchester, 21. (Tel.: Chorlton 2274/5.)

**PRESTWICH, WILLIAM, AND SONS, LTD.**, Dronfield, Derbyshire. (Tel. 2204—6 lines.) Dry and coated Derbyshire limestone and slag for all purposes and to all specifications. "Haddon" foamed slag blocks. (See details under Herefordshire.)

**SALISBURY AND WOOD, LTD.**, Matlock. (Tel. 272/273.) (For details, see Derbyshire.)

**SHIRE OAK GRAVELS, LTD.**, Lichfield Road, Walsall Wood, Staffs. Washed crushed gravel and washed sand. (Tel.: Brownhills 3253.)

**TERN HILL SAND AND GRAVEL CO., LTD.**, Almonington, near Market Drayton, Staffs. (Tel.: Hales 261/2/3.) Pit sand, concrete sand, and all grades of washed crushed gravel. Hardcore, clinkers, ashes and hoggins.

**TRENTHAM GRAVEL CO., LTD.**, Lordsley Quarries, Willoughbridge, near Market Drayton, Salop. (Tel.: Pipe Gate 304/5.) All sizes crushed or natural washed gravel. Twice washed sharp concreting sand. Plastering sand. Plant capacity 2,000 tons per day.

**WINDMILL SAND AND GRAVEL QUARRIES, LTD.**, Cannock Road, Wolverhampton. (Tel. 31108.) Concrete aggregates, plastering, building and asphalt sand. All to B.S.5.

## SUFFOLK

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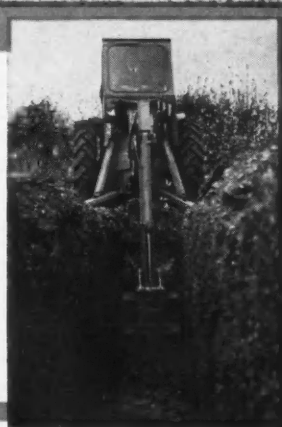


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